

Nov. 1878-82

The United States MILLER

Published by
E. HARRISON CAWKER. { Vol. 14, No. 2. }

MILWAUKEE. DECEMBER, 1882.

{Terms: \$1.00 a Year in Advance.
Single Copies, 10 Cents.}

The inherent and intrinsic merit of any article of manufacture, or any system of procedure, is alone demonstrated by the results secured by protracted employment thereof. Success is always a sure indication of merit in any article offered for adoption, and we risk nothing when we claim that the

STEVEN'S NON-CUTTING CORRUGATED ROLLER MILL

Is to-day without a successful rival in popularity with the milling fraternity. Adapted for both spring and winter wheat, and for all the operations of reduction and flouring, and with a record of success in these operations unapproached by any similar device, no miller, contemplating a change in his equipment, should fail to familiarize himself with the features which have given these mills their popularity.

THE JNO. T. NOYE MANUFACTURING CO.,

[Please mention this Paper when you write to us.]

BUFFALO, N. Y., U. S. A.

ODELL'S ROLLER MILL.

An Established Success.

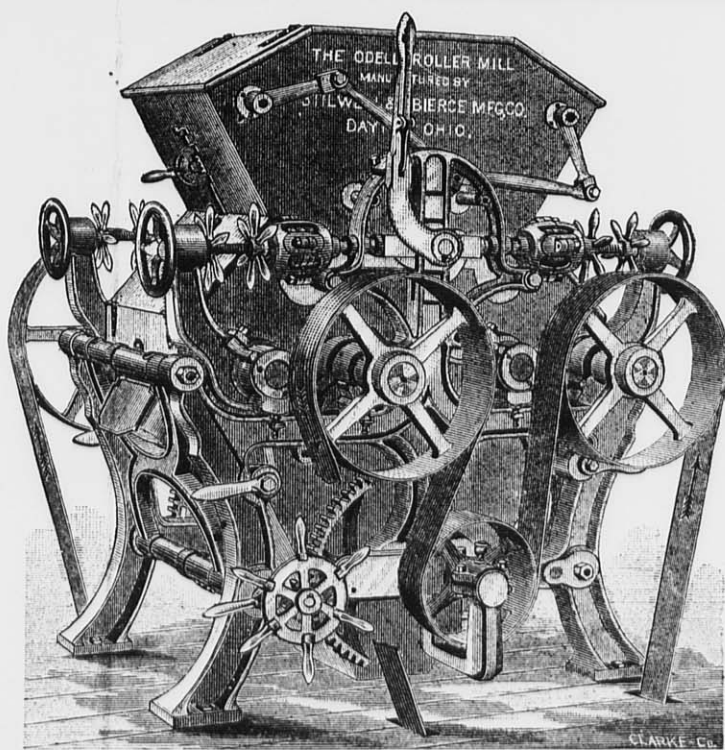
We invite particular attention to the following

POINTS OF SUPERIORITY,

possessed by the Odell Roller Mill over all competitors, all of which are covered by Letters Patent, and cannot be used on any other machine.

1. It is driven entirely with belts, which are so arranged as to be equivalent to giving each of the four rolls a separate driving belt from the power-shaft, thus obtaining a **positive differential motion**, which can not be had with short belts.

2. It is the only Roller Mill in market which can be **instantly stopped without throwing off the driving belt**, or that has adequate tightener devices for taking up the stretch of the driving-belts.



3. It is the only Roller Mill in which **one movement of a hand-lever spreads the rolls apart and shuts off the feed at the same time**. The reverse movement of this lever brings the rolls back again exactly into working position and **at the same time turns on the feed**.

4. It is the only Roller Mill in which the movable roll-bearings may be adjusted to and from the stationary roll-bearings **without disturbing the tension-spring**.

5. Our corrugation is a decided advance over all others. It produces a more even granulation, **more middlings of uniform shape and size**, and cleans the bran better.

WE USE NONE BUT THE BEST

Ansonia Rolls!

References and letters of introduction to parties using Odell Rolls will be furnished on application, to all who desire to investigate the actual work of these splendid machines.

Circular and Prices on Application to Sole Manufacturer,

STILWELL & BIERCE MANUFACTURING CO.,

[Mention this Paper when you write to us.]

DAYTON, OHIO, U. S. A.

THE LARGEST MILL FURNISHING ESTABLISHMENT IN THE WORLD.

RELIANCE WORKS,

EDW. P. ALLIS & CO. Prop's.

MILWAUKEE, WIS., U. S. A.

SOLE MANUFACTURERS OF

Gray's Patent Noiseless Belt

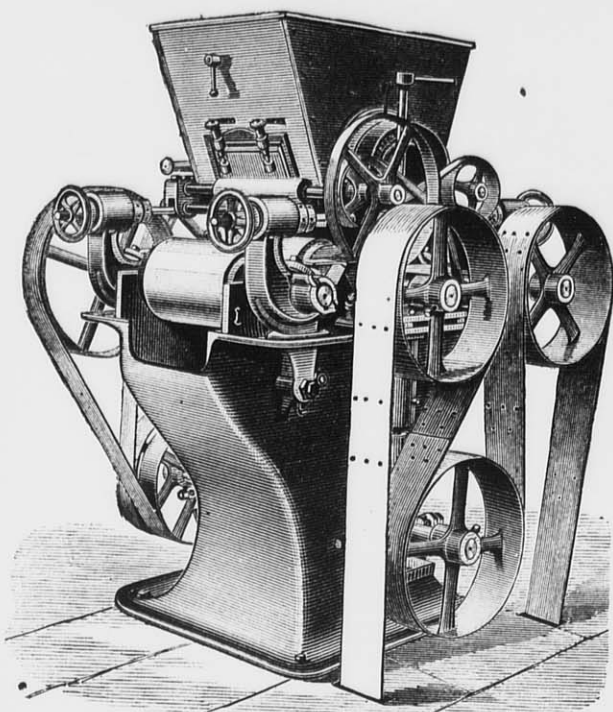
ROLLER MILLS

WITH

WEGMANN'S PATENT PORCELAIN ROLLS.

Unexcelled for reducing Middlings to Flour.

Far ahead of Smooth Iron or Scratch Rolls and entirely superceding the Mill Stones for this purpose.



Read the Following Letters.

Messrs. E. P. Allis & Co., Milwaukee, Wis.
 Terre Haute, Ind., Aug. 22nd, 1882.
 Gentlemen:—We are very much pleased with the whole eight set of Porcelain Rolls you put in our Mill. The two double set sent us soon after starting up our mill last fall, we put in place of two run of stones for grinding our coarse Middlings.

We find the Flour from the Porcelain Rolls much more evenly granulated and much sharper and cleaner than that we got from the stones, besides the second or fine Middlings are much better, being almost entirely free from germs and not as specky.

Yours Truly,

KIDDER BROS.

[Mention this Paper when you write to us.]

Messrs E. P. Allis & Co.

Kings County Flour Mills, Brooklyn, N. Y., Aug. 15th, 1882.

Gentlemen:—You ask how I like the Porcelain Rolls as compared with Mill Stones. I have been using the original Porcelain Gear Machines for five years and became convinced a long time ago that Mill Stones could not produce as satisfactory results.

I am now operating your Improved Machine of increased size with nice adjustments, working without noise with Gray's Patent Belt Drive. The Flour it produces is beautifully grainy and strong and its capacity two or three times more than the old Gear Machine.

It runs splendidly, gives no trouble, consumes less power than Mill Stones, dispenses with costly stone dressing and for reducing Middlings and soft branny residuums and tailings is unequaled by any Machine, Iron or stone, at least this is my opinion after five years of practical experience.

Yours truly,

JOHN HARVEY,

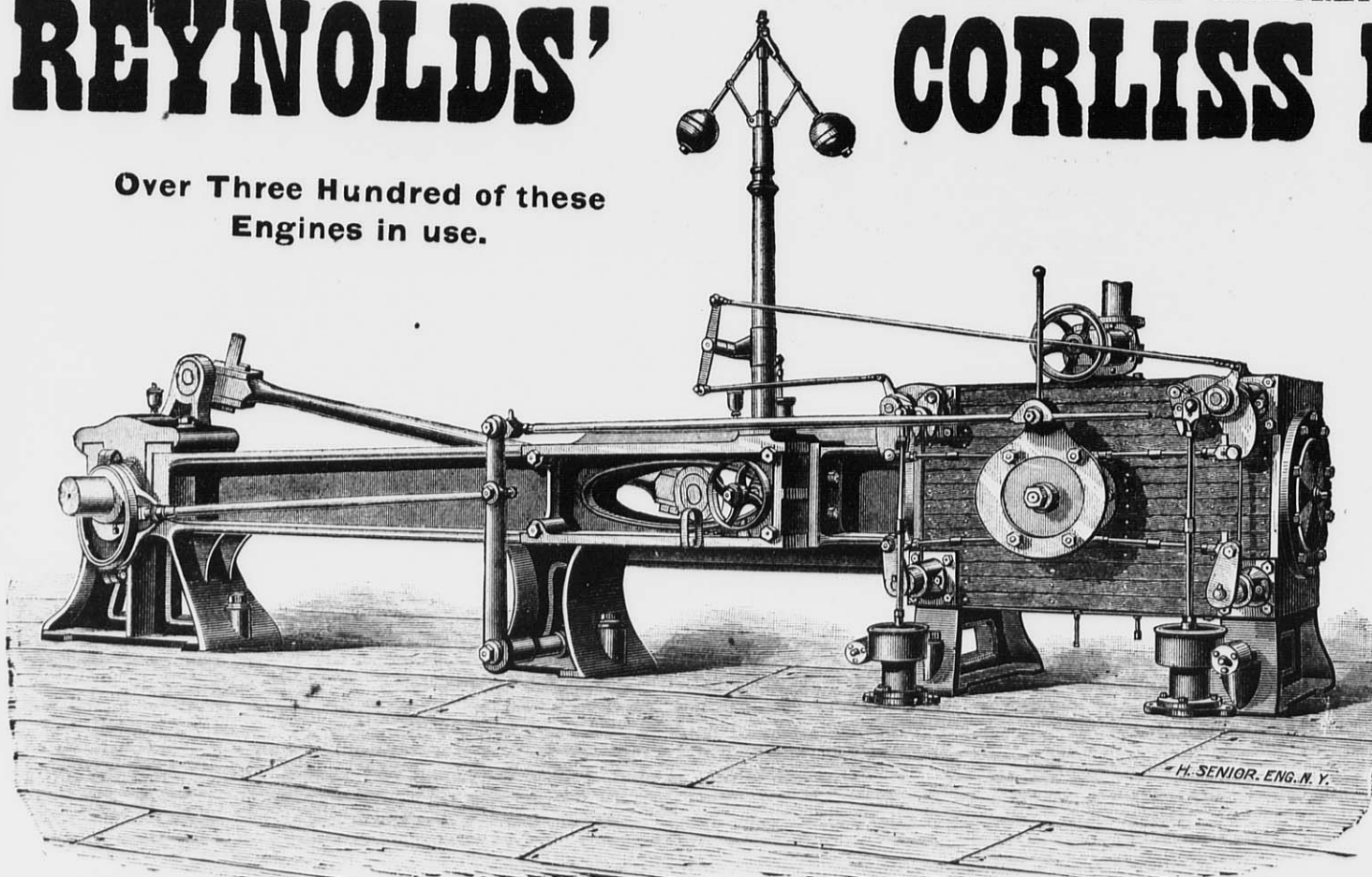
Head Miller Kings Co. Mills, Brooklyn, E. D.

ALSO SOLE MANUFACTURERS OF THE CELEBRATED

REYNOLDS'

CORLISS ENGINES

Over Three Hundred of these Engines in use.



These Engines are especially adapted for use in Flouring Mills—being unsurpassed in Simplicity, Durability and ECONOMY OF FUEL, and far ahead of any other

Automatic Cut-off Engines.

Send for catalogues of Roller Mills, Flour Mill Machinery, Saw Mill Machinery, Reynolds' Corliss Engines, etc., etc., address:

Edw. P. Allis & Co.,

MILWAUKEE, WIS.

The following is a partial list of Flouring Mill owners who are using the Reynolds' Corliss Engines.

J. B. A. Kern.....	Milwaukee, Wis.	Albert Wehausen.....	Two Rivers, Wis.	L. H. Lanier & Son.....	Nashville, Tenn.
LaGrange Mill Co.....	Red Wing, Minn.	Green & Gold.....	Faribault, Minn.	Wells & Nieman.....	Schuyler, Neb.
New Era Mills.....	Milwaukee, Wis.	Meridan Mill Co.....	Meridan, Minn.	Grundy Centre Milling Co.....	Grundy Centre, Iowa
Daisy Flour Mills.....	Milwaukee, Wis.	Townsend & Proctor.....	Stillwater, Minn.	B. D. Sprague.....	Rushford, Minn.
Winona Mill Co.....	Winona, Minn.	Sooy & Brinkman.....	Great Bend, Kansas	The Eisenmeyer Co.....	Little Rock, Ark.
W. D. Washburn & Co.....	Anoka, Minn.	Frank Clark.....	Hamilton, Mo.	A. W. Ogilvie & Co.....	Montreal, Canada
Archibald, Schurmeier & Smith.....	St. Paul, Minn.	N. J. Sisson.....	Mankato, Minn.	Geo. Urban & Son.....	Buffalo, N. Y.
White, Listman & Co.....	La Crosse, Wis.	Jas. Campbell.....	Mannannah, Minn.	A. A. Taylor.....	Toledo, O.
Milwaukee Milling Co.....	Milwaukee, Wis.	C. J. Coggin.....	Wauconda, Ill.	Pindell Bros. Co.....	Hannibal, Mo.
Stuart & Douglass.....	Chicago, Ill.	J. J. Wilson.....	Algona, Iowa	Kehler Milling Co.....	East St. Louis, Ill.
Stillwater Milling Co.....	Stillwater, Minn.	Ames & Hurlbut.....	Hutchinson, Minn.	Walsh, DeRoo & Co.....	Holland, Mich.
Otto Troost.....	Winona, Minn.	Lincoln Bros.....	Olivia, Minn.	Goodlander Mill and Elevator Co.....	Fort Scott, Ks.
E. T. Archibald & Co.....	Dundas, Minn.	Northey Bros.....	Columbus Junction, Iowa	W. Seyk & Co.....	Kewaunee, Wis.
C. McCreary & Co.....	Sacramento, Cal.	Bryant Mill Co.....	Bryant, Iowa	Topeka Mill and Elevator Co.....	Topeka, Kan.
Gardner & Mairs.....	Hastings, Minn.	David Keppord.....	Grundy Centre, Iowa	Strong Bros.....	Graceville, Minn.
J. Schuette & Bro.....	Manitowoc, Wis.	Waterbury & Wagner.....	Janesville Minn.	C. A. Roberts.....	Fargo, D. T.
Minnetonka Mill Co.....	Minnetonka, Minn.	W. A. Weatherhead.....	South Lyons, Mich.	Coman & Morrison.....	Fox Lake, Wis.
J. D. Greene & Co.....	Faribault, Minn.	Geo. Bierline.....	Waconia, Minn.	J. G. Schaapp.....	Grand Island, Neb.
F. Goodnow & Co.....	Salina, Kansas	James McCafferty.....	Burton, Mo.	Fred Schumacher.....	Akron, Ohio
A. L. Hill.....	Faribault, Minn.	Geo P. Kehr.....	Menomonee Falls, Wis.	Warren Mfg. Co.....	Warren, Minn.
Beynon & Maes.....	Owatonna, Minn.	Winona Mill Co. compounding their present 24x60 Winona. M.			
Eagle Mill Co.....	New Ulm, Minn.	Forest Mills Co.....	Forest, Minn.		

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THE NEW CHICAGO BOARD OF TRADE.

Size of Building, 173 feet 9 inches, by 225 feet. Main Hall, 170 by 144 feet. Height of Tower, 303 feet. Height of Corners, 160 feet. Height of Rear Building, 172 feet.

UNITED STATES MILLER.

PUBLISHED MONTHLY.
OFFICE NO. 118 GRAND AVENUE, MILWAUKEE, WIS.
Subscription Price.....\$1 per year in advance.
Foreign Subscription.....\$1.50 per year in advance.

MILWAUKEE, DECEMBER, 1882.

A Stock, Grain and Mining Exchange has been organized at Winnipeg, Manitoba, and will be in perfect operation in December.

We are pleased to acknowledge a pleasant call from P. G. Monroe, Esq., and G. V. Heckel, Esq., both of Chicago, the Western representatives of *The Millers' Journal*, of New York.

THE partnership heretofore existing between Charles B. Slater and W. S. McClelland, under the firm name of C. B. Slater & Co., Blanchester, O., was dissolved by mutual consent, Nov. 20, 1882, and is succeeded by THE SLATER MILL CO., of which C. B. Slater is President and J. B. Starkey, Secretary.

UPON the examination of the official documents the UNITED STATES MILLER learns that the total export of wheat for the ten months ending Oct. 31, 1882, was 100,106,840 bushels, valued at \$116,741,005, and of flour 5,465,740 barrels valued at \$33,416,661. The total value of exports of breadstuffs of all kinds during the time above specified was \$149,737,960 against \$192,292,552 during the corresponding time in 1881.

THE *Baltimore Sun* in a late leading article on Industrial Schools, says: "Boys may be trained in them to useful careers, whereas without such advantages they fall into habits of idleness and dissipation, or betake themselves in excessive numbers to unremunerative clerkships. The real and best industrial schools were those supplied by the old apprentice system, for it trained hands, mind and morals together. If the American mechanics are wise and are not already outvoted by their foreign associates in the shops, they will re-establish the system they killed in their folly."

THE real position of the United States in the food supply of Europe, for the first time selling on a falling market, attracts general attention. Great crops have never been harvested and brought to sale in the United States with a more general feeling of business distrust that exists this fall. Prices of breadstuffs have strengthened in Liverpool but there was no response in Chicago. Exports from the Atlantic ports fell off, but supplies afloat and on their way to the United Kingdom have increased. In other words, while existing prices do not tempt farmers to sell in Chicago, they satisfy those who sell at Odessa and San Francisco. A country which closed last year with too little to sell, and begins this year with too much; which pays this year \$116,000,000 to pensioners whose services were in the past, and spikes \$300,000,000 to the ground in railroads whose production is in the future, and which is weaving more cloth and making more iron than it can use, with the prospect that anywhere from \$50,000,000 to \$150,000,000 may be struck off next winter, is encouraging, but scarcely leads to the certainty on which prosperity chiefly rests.—*Chicago Tribune*.

MECHANICAL TRAINING AT GIRARD COLLEGE.

The *Philadelphia Record* says that the Board of City Trusts has established in Girard College a mechanical school which is attracting the attention of educators in all parts of the country. It is under the supervision of T. Mason Mitchell, formerly an engineer in the United States Navy and founder of the Mechanical School of Handiwork in the Spring Garden Institute. The workshop has only been in existence since April 12, and the success which has attended the efforts of Mr. Mason to instill in the minds of the boys a practical knowledge of machinery have exceeded the most sanguine expectations of its founders. The plant of the workshop consists of one 4-horse Otto gas engine, neatly railed around to prevent accidents; a 16-inch screw-cutting lathe of the most approved make, a 22-inch planer of the latest improved pattern, a shaping machine, a vertical drill press, 30 other presses, patent swivel, four vises, and a full and complete outfit of tools for each vise, such as files of various cuts, chisels, hammers, squares and awls. One hundred and sixty boys, ranging from eight to eighteen years, are being instructed in the manipulation of these machines and tools, and the work turned out daily will, in many instances, compare favorably with that made by skilled mechanics.

The system of instruction imparted to the pupils is of a practical character. They are first taught the use of the hammer and chisel upon rough material fresh from the foundry and the forge. They are then familiarized with the use of the files and other tools of the vise, enabling them to produce perfectly planed surfaces and angles, both right and acute. The young learner is next taught to make hexagon and octagon bolts, with hexagon heads. The nuts and bolts are turned to a given size, and the requisite thread is turned, which calls into requisition both the vise and the power tools. After obtaining a thorough knowledge of the use of all these tools he is then taught to construct the different parts of steam engines and models of machinery. A one and three-quarter horse-power engine, which was begun a few weeks ago, is nearly completed, as are also other engines of lesser power.

Mr. Mason, who is heartily devoted to the work entrusted to his care, feels certain that two-thirds of the older lads will, in the course of four years, be able to go out into the world and demand and obtain positions as full-fledged journeymen.

"As soon as a boy enters," said Mr. Mason, in an interview, "he is immediately given a hammer and chisel, and taught how to use them. Unlike the average apprentice in a regular machine shop, he is not required to spend a year or so sweeping up and doing other like drudgery, and is thus saved the time wasted by apprentices. Besides, our boys are lectured on theoretical mechanics four or five times a month, and are taught mechanical and free-hand drawing several times a week by Prof. George Becker.

"It is impossible to conceive the value of such a school as ours, and the time is not far distant when the Government will be obliged to establish such schools in connection with our public schools, owing to the diminution in the ranks of skilled labor, the same as Germany, France, England and Russia are now doing. There are few schools like ours in this country. The only ones in existence are the School of Technology at the Hoboken Institute, the Boston School of Technology, the St. Louis School of Technical Education, the School of Mechanical Handiwork at the Spring Garden Institute, the Mechanical School of the Cornell University at Ithaca, N. Y., the School of Mechanical Work at the University at Wooster, and the School at Swarthmore. Owing to the labor-saving tools invented during past years, few skilled mechanics are turned out of machine shops at the present day. As a general thing, men are kept at one branch, and are not given a chance to familiarize themselves with every part of the trade. They become proficient in the handling of a drill-press, a shaver, a planer or a lathe, as the case may be, but few are allowed to become expert in the manipulation of all.

"This should not be. Our school in this respect excels a machine shop, as the boys are taught how to use all these machines. I may seem an enthusiast on the subject, but I believe it to be a glorious work to be thus engaged instructing the youth of this institution. The decadence of the old apprenticeship system is a vital blow to the industry of iron-working, and the sooner our legislators realize this the better it will be for the country, for the day is approaching when the need of some system by which men may be made masters of this trade will be sorely felt. Look at the thousands of bright boys attending our public schools! What is to become of them? All can't become clerks and bookkeepers, and if they go to learn a trade it is sad, indeed, to reflect that after attaining manhood they will develop into botchers. I repeat it, that the public schools should have added to them departments of industrial education, where the youth, the future men of the nation, may obtain practical knowledge of the trades."

TRADE WITH THE ARGENTINE REPUBLIC.

A Washington despatch to the *Herald* says: "Gen. Osborne, Minister to the Argentine Republic, who is in the city, expects to return to his post within two or three weeks. He has given great attention to trade between this country and South America, and his information on the subject is broad and exhaustive. He says that the country of the Argentines is to South America what the United States is to North America. He says the people would like to trade with the United States direct, but the want of a shipping line between Buenos Ayres and our ports makes it next to impossible. Most of the goods brought from this country are first shipped to England, thence are reloaded and

taken to South America as English products. This used to be the case with American cottons. They were taken to England and stamped with a new trade-mark, and palmed off as the manufactures of English mills. This fraud was exposed, however, and now there is a house trading direct in American cotton fabrics by means of sailing vessels chartered for the express purpose of carrying it cargoes. A great amount of American machinery for agricultural uses is also found in the Argentine markets, and this class of merchandise also comes direct. There is a great deal of American meal consumed in that country, but this, with most of our other wares, comes by reshipment from England. Gen. Osborne says that the English and French practically monopolize the trade of the country, simply because their steamships ply at regular intervals between the ports of South America and Europe, which renders it practically impossible for Americans to compete with them, as long as we have no steamships in the trade. He says that it is a cause of remark among the natives that our steamers do not come there, and he has always told them that we were coming some day, but that our merchants had so vast an amount of territory of their own that they could not reach out for foreign commerce.

MILLERS' NATIONAL ASSOCIATION.

OFFICIAL CALL FOR THE JANUARY 1883 MEETING.

We have just received the following communication from S. H. Seamans, Esq., Secretary of the Millers' National Association which is self-explanatory.

Editor *United States Miller*, Milwaukee.

DEAR SIR: In accordance with a resolution adopted by the Sub-Executive Committee of the National Association at Chicago, November 20, I am directed to call a convention of delegates from the different states to convene at Cleveland, Ohio, Wednesday, Jan. 31st, 1883.

Delegates to said meeting will consist of the entire executive committee of the National Association, president, secretary and executive committee of each organized State Association and five prominent members from each unorganized state. This meeting is called for the purpose of discussing matters pertaining to litigations present and impending; affairs of dormant State Associations, with view to increasing an interest in, and adding to their membership; also plans for and deciding upon a place for holding a grand reunion in June next, and such other and important business as may come before the meeting.

Yours truly,
S. H. SEAMANS, Secretary.

A REVOLUTION INDICATOR WANTED.

The *Industrial World*, (Chicago,) says: We heard one day recently, a well known engineer express a desire for a revolution indicator, to be used in the end of a shaft like the little instrument at present so extensively used for this purpose, but which should be more accurate in its indications, or rather which should permit the user to make observations that were substantially correct. His opinion of the present counter is, that in using it in connection with a watch upon which the time must be noted, is fatal to accuracy, since the personal equation of the observer must be taken into account, which in the case of an engineer, or a man vexed with many and various cares, is scarcely twice alike. It would follow, then, from this presentation of the case, which is unquestionably correct, that in making observations of the revolutions of a shaft in the ordinary way, the observer will never make it absolutely correct; that two observers will not make it the same; and that the same observer, ordinarily, will not make it alike (in the extent of the error) two days in succession. A valuable suggestion of this engineer is, that with the present indicator should be combined a time movement, capable of marking time correctly for, say two or three minutes, the whole so arranged that by applying the end of the spindle to the center in the shaft, just as at present,) after allowing sufficient time to insure the motion of the two being identical in time, the accounting and time motions can be simultaneously engaged, and automatically and simultaneously disengaged at the expiration of a definite time—perhaps one, two or three minutes, as desired. A glance will then show the exact revolutions without the possibility of sensible error. (The advantage of some such device as this, where, as is becoming more and more common, it is advisable to determine the exact revolutions of quick-running machinery, is beyond question, and it would not be a serious undertaking to construct a simple and effective arrangement of the kind—one that would be both mechanically and commercially a success). Since the present intention is towards perfection in all instruments of observation, it is

time our tool-makers gave us something by which to correctly observe the revolution of machinery.

RECENT MILLING PATENTS.

November 7, 1882, the following patents were issued:

Dust Collector, for flour mills, (2 patents), Wm. H. Fruen, S. Potts and C. J. Elliott, Minneapolis, Minn.

Middlings Purifier, Louis Gathmann, Chicago, Ill.

Grain cleaner, Louis Gathmann, Chicago, Ill.

Machine for mixing grain of different sizes, August J. Justi, Charleston, S. C.

Middlings Purifier, William Klostermann, Cologne, Minn.

Centrifugal bolt, Jonathan Mills, Chicago, Ill.

Manufacture of flour, Faustin Prinz, St. Paul, Minn.

The following patents were issued November 14, 1882:

Millstone-dress, Fred. W. Dove, Jonesborough, Tenn.

Method of and apparatus for milling, Charles L. Gratiot, Chicago, Ill.

Centrifugal flour bolt, Jonathan Mills, Holcomb & Heine, Silver Creek, N. Y.

Mill for reducing grain, John Hollingsworth, New York, N. Y.

Roller-mill, (3 patents), Andreas Mechwart, Budapest, Austria-Hungary.

Dust collector for flour mills, John R. Smith, Rochester, N. Y.

Middlings purifier, Clarence O. White, Minneapolis, Minn.

The following patents were issued Nov. 21, 1882:

Middlings purifier, Faustin Prinz, Dundas, Minn.

Grinding mill, Pierre Fauzeu, Guingamp, France.

Grain-drying apparatus, Fred. W. Weisbrock, New York, N. Y.

FOREIGN GRAIN CIRCULARS.

KUFEKE'S CIRCULAR.

LIVERPOOL, November 15, 1882.

The weather has now become more settled, and frost has set in. Farmers have so far made little progress with field work, and sowing has been completed in a very limited area only.

Deliveries of native wheat are still diminishing, and last week have only amounted to about 177,000 qrs., at the average price of 46-11d., exactly the same as in the preceding week, against 46-9d. same time last year.

A limited consumptive business continues to be done in flour, with prices for winter wheat well maintained. New Minnesota flours, which now arrive pretty freely, are neglected, and the quality of the same does not give much satisfaction, as they mostly lack strength. No doubt they will continue to improve as they dry out, being yet rather fresh. Values of the same are, however, 1 shilling per sack lower.

Wheat has ruled very firm, and red winters are 1d. to 2d. per cental dearer on the week; other grades are unchanged.

GIBSON & CLARK'S CIRCULAR.

GLASGOW, Wednesday, Nov. 15, 1882.

During the past week the weather has been cold, with severe frost and fog.

Our imports of wheat have been small, of sack flour liberal, and of barley large.

The trade during the week has been quiet, but firm for breadstuffs; but the demand for feeding stuffs has been large, and prices have been rapidly advancing for barley, pease and maize, and a large business in the two first named articles has been done.

To-day our Corn Exchange was well attended. Red winter wheat met a good consumptive demand at 3d. to 6d. per boll advance on the week. Springs firm. Flour steady. Grinding barley in good demand at 3d. to 6d. Other barley steady. Oats and Beans firm. Pease advanced 9d. on the week. Maize held for 22s. 6d. Oatmeal steady.

DUNLOP BROTHERS CIRCULAR.

GLASGOW, November 15, 1882.

Trade has been firm, with rather a hardening tendency, since last report, and a steady business doing at full prices. Arrivals of wheat and flour moderate, barley liberal and maize nil.

To-day's market was fairly attended. Wheat met a good sale at an advance of 3d. per boll* for red winter, while other sorts were unchanged. Flour also in request at prices slightly in sellers' favor, the demand running chiefly on spot Minnesota straights. Maize continues firm at the extreme limits of last Wednesday, but demand light. Barley, oats and pease are in request at rather more money.

* A boll contains four Winchester bushels.

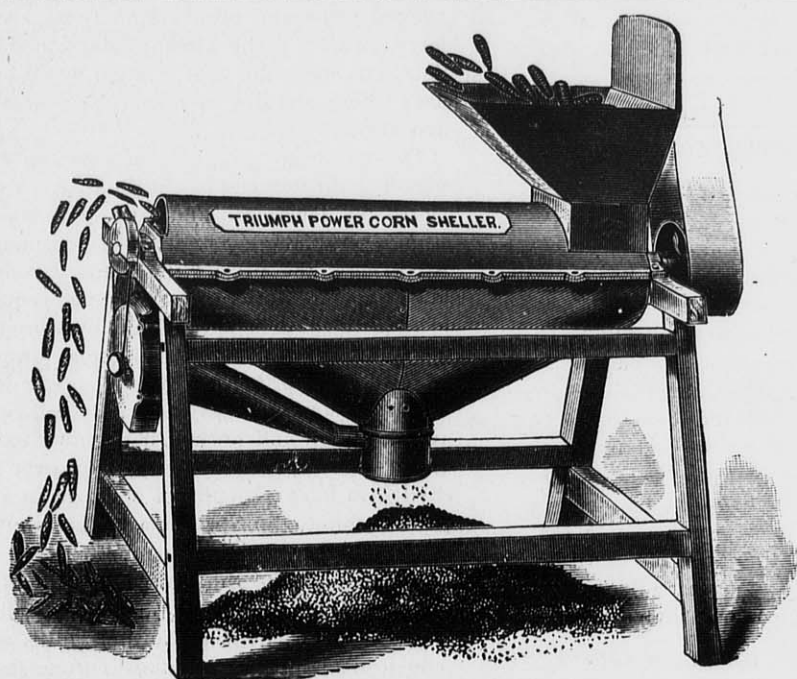
READ THE TESTIMONIALS!

THE "TRIUMPH"

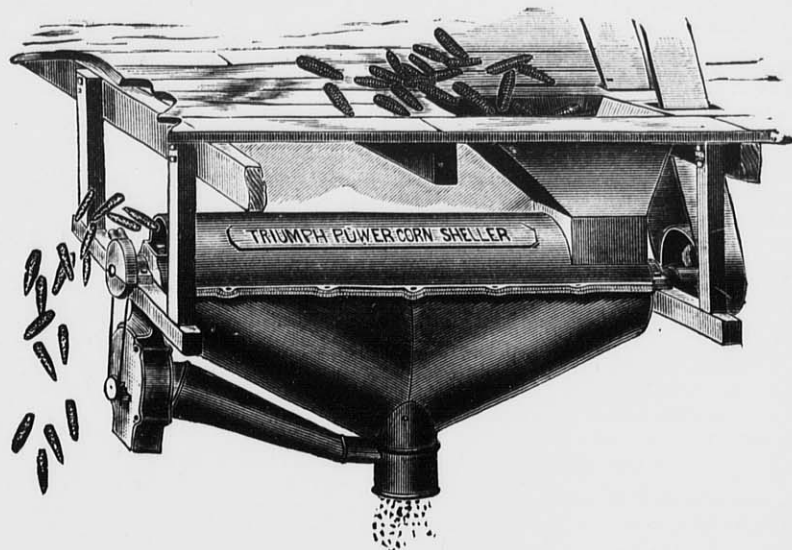
POWER CORN SHELLER!

Is the Cheapest, Best and Most Simple
Power Corn Sheller in Use!

— EVERY SELLER WARRANTED. —



Testimonials



HAZLETON, MICH., July 12, 1882.
Paige Manufacturing Co., Painesville, O.:

The Triumph Power Corn Sheller, which I purchased of you about four years ago, gives entire satisfaction. Shells clean, runs light, and does as good work as when started, and not one cent for repairs, as yet.

A. KIMBLE.

MANKATO, July 12, 1882.
Paige Manufacturing Co., Painesville, O.:

Gentlemen: Your Triumph Power Corn Shellers have always given the best of satisfaction wherever I have placed them or saw them in use. They run with little power, and do their work thoroughly and without waste, and being so simple in construction and well manufactured, there is but slight chance of their getting out of order.

Very Truly Yours,

F. L. WATERS.

PEORIA, UNION CO., O., July 12, 1882.
Paige Manufacturing Co., Painesville, O.:

Gentlemen: I am pleased to state the Sheller I bought of you in 1879, has given me entire satisfaction, and the way it handles its grain and does its work, I feel confident I did the best thing I could have done when I bought the Sheller.

Yours Truly,

E. F. ROSETTE.

MORAVIA, N. Y., June 30, 1882.
The Paige Manufacturing Co.:

Gentlemen: In reply to yours of 29th inst., will say that our experience with the "Triumph" Power Corn Sheller has been very satisfactory. The last one we ordered is giving splendid satisfaction, being a very rapid sheller, and at the same time doing its work well. It is certainly the best machine of the kind we are acquainted with.

Yours Respectfully,

JOHN C. ROLLA, Sec'y.

WABASHA, MINN., July 11, 1882.
Paige Manufacturing Co.:

Gents: We take much pleasure in recommending your "Triumph" Power Corn Sheller to the trade. We have three in use which we have purchased of you during the past six or eight months, and can say most emphatically that we think them the best Sheller in use. We examined and saw tested seven or eight different makes and styles of Shellers before buying, and took yours in preference. They shell cleaner on any kind of corn in any condition, run easier, and do more perfect work with less attention, than any Sheller we have ever seen work. This is our candid opinion of your Sheller, and it is not a word too much to say for it.

Yours Truly,

WABASHA ELEVATOR CO.,

per H. P. KRICK, Sec'y.

HERSEY, MICH., July 1, 1882.

Gentlemen: I am happy to say that the Triumph Corn Sheller, purchased of you last fall, has met my most sanguine expectations. It is the only one in this county, and farmers come long distances to avail themselves of the convenience in shelling their corn. I think I may say that hundreds of acres of corn have been planted more than would have been only for its introduction here. I think it the very best Sheller that I ever saw, and if I could not get another it would be no object to sell it for five times its cost.

Truly Yours,

A. ROOT.

BLACK RIVER FALLS, WIS., July 2, 1882.
Paige Manufacturing Co.:

Gentlemen: Your favor of June 29th, to hand. Your machine is strong, simple and shells corn, either wet or dry, thoroughly.

Very Respectfully Yours,

J. G. HEATON.

MANCHESTER, MICH., July 11, 1882.
Paige Manufacturing Co., Painesville, O.:

Gentlemen: The Triumph Sheller shells the corn clean, whether it is dry or wet. It is strong and durable.

A. T. KIRKWOOD.

ROYAL OAK, MICH., July 17, 1882.
Paige Manufacturing Co.:

Sirs: I have at present one of your Triumph Shellers in mill and am very well pleased with it. I think it is, without doubt, the best Sheller I have ever seen. I cheerfully recommend it to all who are in want of a Sheller.

Respectfully Yours,

C. W. MARSHALL.

SOUTH MONTROSE, PA., July 10, 1882.
Paige Manufacturing Co.:

Gents: I have used your Triumph Corn Sheller and would not know how to run a mill without your sheller, for the neighbors would be worse off than I should be, for they don't pretend to shell their corn at home, for they draw corn for 10 and 15 miles to have it shelled, and all the corn that I buy is brought for me to shell, and we all think it is the best that we ever saw.

Yours with respect,

C. HARPER.

BROOKLYN, MICH., June 21, 1882.
Paige Manufacturing Co.:

Dear Sir: Your Corn Sheller gives perfect satisfaction in every respect, and I think, takes the lead of all that I have seen, and I can recommend it to all. It shells as fast as you can get the corn to it, and does it splendidly.

Respectfully Yours,

A. A. WHITING,

Miller.

C. S. TOMPKINS, Prop'r.

NELSON, OHIO, July 2, 1882.

We are well pleased with the Sheller purchased from you and would recommend it to all in need of a machine of that kind.

Yours Truly,

L. C. HOPKINS.

ASHEVILLE, N. C., July 19, 1882.
The Paige Manufacturing Co., Painesville, O.:

Gentlemen: In answer to your inquiry as to our opinion of the Triumph Corn Sheller, would say that it does excellent work, has cost us nothing for repairs since we have put it up, (January, 1881). We do not run it to its full capacity only shelling about 40 bushels per hour, but it cleans separates perfectly, and we have no doubt but if run up to speed that it will do everything claimed for it.

Yours Respectfully,

GIRDWOOD & McLELLAN.

BYRON CENTER, MICH., June 24, 1872.
Paige Manufacturing Co., Painesville, O.:

Gents: We would say that the "Triumph" Power Corn Sheller is the best we have had anything to do with.

Yours Truly,

S. S. TOWNER & SONS.

CHELSEA, MICH., August 12, 1882.
Paige Manufacturing Co., Painesville, O.:

Gents: Some three years ago I got one of the Triumph Power Corn Shellers, and can say that I should buy it in preference to any sheller that I have ever run, and I have run the Hutchinson, of Three Rivers, and one or two other patents. It does its work well and does not get out of order; shells fast and clean. Am well pleased with the machine.

Yours Respectfully,

L. E. SPARKS.

HEMLOCK MILLS, CLARK CO., WIS., AUG. 4, 1882.
Paige Manufacturing Co., Painesville, O.:

Gents: We like the Triumph Power Corn Sheller and think it can't be beat. We have not been to any expense with it since it has been put in and it will shell corn clean that is not fit to grind, it is one of the best Shellers we have ever seen for business. Anyone that does not believe it is a good machine, let them come here and we will convince them.

Yours Truly,

WITBEE & LIMPECHT.

MILWAUKEE, WIS., June 8, 1882.
The Paige Manufacturing Co., Painesville, O.:

Gentlemen: We have sold a number of your "Triumph Power Corn Sheller," and cannot but say, that it is a good machine, having given satisfaction wherever we placed it. We cheerfully recommend your machine whenever we have an occasion.

Yours Truly,

COCKLE SEPARATOR MANUFACTURING CO.

MOREY CREEK, MINN., July 24, 1882.

Paige Manufacturing Co., Painesville, O.:

Gents: Yours of June 21st, at hand, and in reply will say that the Triumph Corn Sheller purchased of you supercedes its recommend, and, knowing what we do, if we were in need of a Sheller, we would purchase no other.

Yours, etc.,

PHILEAS & MURPHY.

NORTH BRISTOL, OHIO, June 26, 1882.
The Paige Manufacturing Co.:

Gents: The Corn Sheller I bought of you works very nicely, we have shelled 50 bushels of ears in 20 minutes and will shell faster if run faster, it shells perfectly clean. I am well satisfied with the Sheller.

Yours Truly,

G. F. SAGER.

CARTHAGE, JEFF. CO., N. Y., June 26, 1882.
The Paige Manufacturing Co.:

Gents: It gives me pleasure to say that I am well satisfied with the "Triumph" Power Corn Sheller I have purchased of you two years ago, it performs all you claim for it.

Respectfully Yours,

J. V. GUYOT.

GILBOA, NEW YORK June 26, 1882.
To the Paige Manufacturing Co.:

Sirs: I have one of the Triumph Power Corn Shellers in my Grist Mill, have used it two years with entirely satisfactory results. I think it is the best Corn Sheller made.

Yours Truly,

LUMAN REED.

SAGINAW, MICH., July 1, 1882.
The Paige Manufacturing Co., Painesville, O.:

Gents: We are very much pleased with the workings of your Power "Triumph," and think it an A. 1 machine.

Very Truly,

D. H. JEROME & CO.

MELMORE, O., June 30, 1882.
Paige Manufacturing Co.:

Gentlemen: In regard to the "Triumph Corn Sheller" purchased of you a year and a half ago, would say we have shelled thousands of bushels with it and it justly merits the success it has attained. It has paid for itself several times.

Very Respectfully,

J. W. WARNER.

CLINTON, WIS., July 1, 1882.
Paige Manufacturing Co., Painesville, O.:

Dear Sirs: The "Triumph" Power Sheller, I purchased of you a year ago, gives entire satisfaction. I gladly recommend it to anyone wanting a Sheller for mill or elevator.

Respectfully,

J. C. CHURCH.

Send for full particulars, and mention the United States Miller when you write to us.

THE PAIGE MFG. CO., Painesville, Ohio, U. S. A.

UNITED STATES MILLER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.

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[Entered at the Post Office at Milwaukee, Wis., as second class matter.]

MILWAUKEE, DECEMBER, 1882.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER. You will thereby oblige not only this paper, but the advertisers.

Flour Mill Directory.

CAWKER'S AMERICAN FLOUR MILL DIRECTORY for 1882, was completed, ready for delivery February 1, 1882.

It shows that there are in the United States 21,356 flour mills and in the Dominion of Canada 1,488. The mills in the United States are distributed as follows:

Alabama, 388; Arizona, 17; Arkansas, 234; California, 209; Colorado, 52; Connecticut, 309; Dakota, 44; Delaware, 96; District of Columbia, 7; Florida, 81; Georgia, 514; Idaho, 18; Illinois, 1258; Indiana, 1163; Indian Territory, 3; Iowa, 872; Kansas, 437; Kentucky, 642; Louisiana, 41; Maine, 220; Maryland, 349; Massachusetts, 363; Michigan, 831; Minnesota, 472; Mississippi, 297; Missouri, 942; Montana, 20; Nebraska, 205; Nevada, 10; New Hampshire, 202; New Jersey, 445; New Mexico, 28; New York, 1942; North Carolina, 556; Ohio, 1462; Oregon, 129; Pennsylvania, 2786; Rhode Island, 47; South Carolina, 205; Tennessee, 620; Texas, 548; Utah, 129; Vermont, 231; Virginia, 689; Washington Territory, 45; West Virginia, 404; Wisconsin, 780; Wyoming, 3; Total, 21,356.

The directory is printed from new Burgeois type on heavy tinted paper and is substantially bound. It makes a book of 200 large pages. The post offices are alphabetically arranged in each state, territory or province. The name of the mill, the kind of power used and the capacity of barrels of flour per day of 24 hours are given wherever obtained which is in thousands of instances. This work is indispensable to all business men desiring to reach the American Milling Trade.

Price Ten Dollars per copy, on receipt of which it will be sent post paid to any address. Remit by registered letter, post-office money order or draft on Chicago or New York made payable to the order of E. Harrison Cawker, publisher of THE UNITED STATES MILLER, Milwaukee, Wis.

DURING the month of October, 45,965 immigrants arrived in the United States.

Mr. Howard Lockwood, publisher of *The Millers' Journal*, N. Y., was married Oct. 25, 1882, to Miss Clara Baker Done, at Livingston-on-the-Hudson.

THE *St. Louis Miller* is just entering upon its fifth year and presents an unusually good and financially healthy appearance. *St. Louis* millers all swear by it.

OUR readers will do well to read with care the advertisement of the Paige Manufacturing Co., of Painesville, O. The arguments there presented speak highly for the TRUMPH POWER CORN SHELLER.

THE recent election in the State of New York will make the canals free of toll—a public highway. The Dominion of Canada is now agitating the question of a like movement with their canals.

It is the opinion of a leading English commercial journal that large quantities of American corn will be imported and that good prices will be paid therefor, and that this together with the imports for cotton will cause a liberal outflow of British gold to the United States.

WE are under obligations to Messrs. Cole & Co., publishers of the *Grain and Provision Review*, of Chicago, for the use of the handsome cut of the new Chicago Board of Trade Building, which was engraved especially for them as soon as the plans were completed, showing much enterprise on the part of those gentlemen.

DURING the past month, John Herzer, of Milwaukee, a manufacturer of mill picks, died, aged 28 years. He was the fleshiest man in the city and at the time of his death weighed 486 pounds. He continued to work at his business until a day or two before his death. He was kind and gentle in disposition and made hosts of friends.

AN interesting experiment in heliography, or signaling by sunshine, was successfully made in Egypt during the recent campaign. Col. Keyser ascended one of the pyramids near Cairo and, by means of a heliographic mirror, reflected a ray of sunlight to Alexandria, 120 miles away. At that great distance the signals, appearing like pin points of brightness, were easily ascertained to be a message from Sir Garnet Wolseley to the Khedive.

A correspondent of an English paper wants to know why the flour sacks generally are not made smaller. He thinks a 280 pound sack is too heavy to be handled conveniently. He also advocates the universal storage of flour in a dry, dark place. In this country our millers furnish flour in sacks of any size required.

THE *St. Louis Miller* says: "St. Louis has twenty-four flour mills, representing a capital of \$2,067,500, employing 654 men, whose earnings aggregate \$448,109. These mills consume \$11,960,553 worth of grain and produce \$13,759,628 worth of flour. This is the way our milling interest will show up in Chief Nimmo's forthcoming Statistical Report.

It costs more to carry a bushel of wheat from Budapest, in Austria, to Hamburg, Germany, than it does from Chicago to Hamburg."

We have seen the above quotation floating the rounds of the American press for several months. As might be imagined it originated in the brain of some one who delights in making startling assertions without foundation in fact. It is however a fact that European rail transportation is exorbitant in most cases.

BAIN'S' International Telegraphic Code, just published by C. W. Palmer, of the *Northwestern Miller*, Minneapolis, is in our opinion a model book of the kind. It embodies the results of many years' experience in the flour trade and it seems to provide for every possible contingency of bargain, sale or freights in grain and flour dealing. We have the assurance of an exporter of many years' experience that this code will average a saving of fifty per cent. on any that he has ever seen or used in the item of cable tolls, which is a matter of great importance when dealing on close margins. The book is handsomely bound in Russia leather in shape suitable for the pocket and is sold at the low price of \$2.00 per copy, or \$22.00 per dozen.

NON-INFLAMMABILITY OF REDWOOD.—A San Francisco paper says that a quality of California redwood is its ready absorption of water when heated, which for a time makes it almost fireproof. The quickness with which fires are extinguished in San Francisco has often been remarked, and the celerity with which blazing buildings are often transformed into charred remnants is greatly facilitated by the entire lack of the resinous element in the redwood lumber. Resin familiarly known as pitch, is not only highly inflammable, but is insoluble in water, and will burn while being drenched with the element, with which it will not mix. At a recent fire in San Francisco the advantage of redwood in the construction of buildings became apparent. The moment water struck the side of the building or roof timbers it not only quenched the flames but the wood absorbed water as a sponge would, and it became incombustible.

In view of the foregoing, we would suggest that redwood might prove to be an important substance for the woodwork inside of flour mills and for the wooden portions of flour mill machinery.

[Translated for the UNITED STATES MILLER from the Deutsche Mueller Zeitung.]

GRAIN THIEVES IN BUDAPEST, HUNGARY.

The latest sensation in the police circles of the Hungarian capital is an immense theft of grain, lately discovered. Incidentally the police officers succeeded in getting on the track of a wide-spread and well organized gang of thieves, which for a long time has been plundering the largest granaries in the city, and in so cunning a manner that they have been able to carry on their dangerous trade for years. In order to give an idea of the excellent organization of this band, it is sufficient to state that the number of thieves and fences arrested up to date is given by the Pester "Lloyd" at twenty-four among whom there are hucksters, day-laborers, grain-brokers, merchants and even several property owners. This does not, however, by far include all those implicated and a considerable number of arrests is expected within the next few days. The extent of the "business" of the band is indicated by the circumstance that the quantity of grain stolen is estimated by those already arrested at about fifteen hundred "meter centners" (one meter centner 123.5 lbs.) while in reality it is three times that amount. The manner in which the police found out the thieves is quite interesting.

A gentleman, a few evenings ago, saw two trucks laden with grain stopping by a certain house; the drivers took from each wagon two bags and delivered these in passing to a woman. This appeared to him suspicious and he, therefore, called a policeman who arrested them both. On being examined the drivers, after some attempts of evading the questions, admitted that they had frequently assisted in stealing grain, and one of them mentioned unwarily the name of a merchant who had taken part in the theft as receiver of the stolen goods. By following up this clue they succeeded in discovering that the store of this man was the warehouse where the stolen grain was kept. He was immediately arrested and before long a number of members of the league were found out. The most interesting personages in the gang are the fences, who by these and similar operations have amassed considerable wealth. These are the grain merchants, Joseph and Jonaz Kohn, Moritz and Samuel Weil and William Spitzer, a dealer in oats and hay. In the warehouses of each of them a large stock of grain was found, and confiscated by the police. It is also remarkable that the persons mentioned, almost every week, had been in the habit of delivering to different mills, large quantities of grain for milling purposes, from which an idea of the extent of the business carried on by them may be formed.

BUSINESS EDUCATION.

We do our readers a service by calling attention to the SPENCERIAN BUSINESS COLLEGE, Milwaukee, an old and thoroughly reliable institution offering the very best advantages for preparing youths and middle-aged men and women for business pursuits. In whatever business a person may engage, a course of instruction and training in this college will prove an invaluable aid to success. The cost of such a course in time and money is comparatively little while the value of it is great. In fact there seems to be nothing else that does so much to fit young people for active business life as this kind of education. For circulars of the Spencerian Business College address R. C. Spencer, Milwaukee, Wis.

THE C. C. WASHBURN ESTATE.

It has become a common thing in late years, for the heirs or those claiming to be such to contest the wills of rich men, and in countless cases the contestors have been successful in their efforts and no wealthy man now can positively assure himself that his wishes in regard to his estate will be carried out. The latest case of importance in this line affects the estate of the late C. C. Washburn, the great Minneapolis mill owner. The particulars so far as known at present are given in the following dispatch to the *Republican Sentinel*, of Milwaukee.

LA CROSSE, Nov. 23.—Cameron, Losey & Bunn, representing Mr. Chase, of New York, guardian of Mrs. Jeanette Washburn, to-day filed her renunciation of the provisions of the will of the late C. C. Washburn, in the Probate Court. The significance of this is that the widow takes what is allowed her by statute instead of the bequests contained in the will. The law allows her one-third of the property in Minnesota absolutely, and a life interest in one-third of the property in Wisconsin and Missouri. The executors of the estate Gysbert Van Steenwyk, Charles Payson and Charles K. Martin, will soon institute suit for the construction of the will. They have engaged Finches, Lynde & Miller, of Milwaukee, as counsel. Mrs. Washburn, as is well known, has been insane during the past twenty-five years, and is now confined in a private insane asylum in the vicinity of Boston. After the death of her husband, Mr. Chase, of New York, was appointed as her guardian. The will stipulated that she should be cared for in the best manner possible, and that to effect this no money should be spared. In addition to numerous private bequests provision was made for a public library at La Crosse and an orphan asylum in Minneapolis. In this State the widow has a right to file a notice in the Probate Court that she intends to take property under the provisions of the statutes instead of the will. This notice must be filed within a year and subsequent to the time that the will is probated. The question in this case is whether such a notice can be filed by anyone but the widow, who, being insane, cannot do so personally. The statute does not authorize the guardian to do so, and in this state the presumption is always in favor of carrying out the will of the testator. The executors will therefore file a bill in the Circuit Court for La Crosse County, asking for directions as to what rights Mrs. Washburn or her guardian have in the premises. If the Court decides that the guardian or the Court itself can make an election in the place of Mrs. Washburn, it will still be for the Court to decide whether under the circumstances of the case it will not elect that the will of the testator shall be carried out, as he makes ample provision in the will for her maintenance and support. In case the Court should decide that she shall take under the statute and not under the will, she will then be entitled in this State to the dower and lands of which the testator was seized during coverture, and also the distribution of the share of personal property. Ex-Gov. Washburn was the owner of very valuable flouring mills in Minneapolis, estimated to be worth

\$900,000. Under the statute of Minnesota the widow is entitled to one third of all the lands of which her husband was seized during coverture, in fee absolute. If the Court decides that Mrs. Washburn can take against the will, a life estate in one third of all the pine lands and other lands owned by Mr. Washburn within this State, and one-third of the property belonging to the estate, also the fee in one-third of the flouring mills and the lands in the Minnesota estate, it will defeat the intention of the testator and place in the hands of the guardian property amounting in value to \$500,000 or \$600,000. If, on the other hand, the Court decides that the provisions made in the will for Mrs. Washburn are adequate in every way and that there is no reason for diverting this large fund and placing it in the hands of the guardian, the executors will then be able to execute the trusts in the will, pay all the legacies and carry out the liberal endowments for the orphan asylum in Minneapolis and the public library at La Crosse.

THE INFLUENCE OF SOUTHERN FLOUR MILLS.

The industrial journals of the Southern States bring to us, week after week and month after month, lines chronicling the completion of new flour mills, cotton mills, iron works, etc., almost to the end of the list of manufactures.

We will speak only as regards the flouring industry. Since January last there have been 800 flour mills erected in the Southern States, many of which are built upon the latest improved plans and numbers of them are of large capacity. The wheat production of the Southern States this year is larger by far than ever before, and this we may also say of corn and oats.

These facts are prophetic of a serious falling off in the demand by the South from the North for flour, corn and oats. The Mississippi river, that great highway of commerce, will bring to the mills of the South at a moderate expense, all the wheat they may require to make up the deficiency of their own supply.

An enthusiastic resident of Georgia, formerly from the North, said to us the other day: "In less than five years the South will raise

ALL the grain and pork that her own want require—and more too, and perhaps even we shall soon have a surplus of flour, grain and pork to ship to the North, if a demand should arise on account of a short crop."

We congratulate the Southern millers on their favorable prospects, and believe, like our Georgian friend, that Northern mills will soon lose a large share of the Southern flour trade, but Cotton, Tobacco and Sugar will always be the staple articles of commerce from the South, and we scarcely believe that they will ever produce more flour than their own wants require.

GRAIN GAMBLING.

AN ILLINOIS DECISION THIS TIME.

Chicago Times, Oct. 27th: A dozen decisions were delivered by the Appellate Court yesterday morning. Among the most important was that in the case of John C. Colerwood against McCrea and others, which is classed among the disputes arising out of Board of Trade transactions. Suit was brought in the Superior Court of the county to recover \$505, losses on a deal of 20,000 bushels of wheat, and \$50 for commissions, and a verdict for \$556.25 obtained. The case was carried to the Appellate Court on the question whether the trading was to be in differences or a delivery and receiving of goods. On the general question the court says: "We have occasion so frequently to express our views of the law applicable to cases of a similar character to the one now presented as to render it unnecessary to enter upon the discussion of the subject here." After quoting Tenner v. Foote, 4 Brad., 594; Webster v. Sturgis, 7 Id., Beveridge v. Hewitt, 8 Id., 467, in which it is declared that transactions where there is to be no delivery or reception of goods, the difference being paid in money, come within the statute against gambling and are void, the Court goes on to say: "From the views expressed by us we feel no inclination to recede, believing them to be wise and salutary, and calculated to conserve not only the best interests of the community at large in tending to check the prevailing widespread mania for gambling speculations, but also to restrain the members of a great, and doubtless useful as well as necessary, association of business men from permitting themselves to become instrumentalities in a course of dealings which the law denounces as contrary to public policy, illegal, and void; and we think it may now be considered as settled by the current of adjudicated cases that contracts like those above referred to can not be made the basis of any right of action in a civil suit by or against either party to them." In the case before it, the Court failed to find any evidence of an intention of delivery, and reversed the judgment of the Court below and remanded the case.

WALTER'S DOUBLE CURRENT MIDDINGS PURIFIER.

We illustrate on this page J. T. Walter's Double Current Middlings Purifier, a machine which has met with unprecedented success since its introduction to the trade. Mr. Walter is a practical miller of great experience and believes he has succeeded in constructing a middlings purifier which will meet the demands of the best millers in the country. Those who have used it are outspoken in their praise of it.

The special points claimed for the machine are its compact form, large capacity, the high character of its work, its freedom from unnecessary complications of parts, and its ingenious device for cleaning the cloth. As the points claimed constitute the most desirable features in a purifier, a brief description of its method of operation will be perused with interest by the reader.

The middlings are first spouted into an Automatic Separating Feeder, and spread in a thin sheet by the feed roll. This feed roll has a slide of the usual pattern, but with this difference, that instead of being set in the old way, with a thumbscrew by hand, it is connected by means of a connecting rod and shaft attached to the slide, to a ball connecting with the lever which extends through the top of the hoppers. It is easily regulated and only requires a small amount of feed—a good point. The heavier particles which may be drawn up are deposited on the outside of the machine, the same as screenings from a smut machine, and may be run back to the head of the machine again. After the middlings leave the feeder they drop on the head of the first sieve, which is covered with a fine cloth. Here a light draught is used, passing through the sieve and falling on the roof, which slopes in the same direction as the sieve, or towards the head of the second sieve. The second sieve is pitched in the opposite direction, and is covered with coarse cloth.

The middlings which are too coarse to pass through the first sieve, drop over the tail and fall on the head of the second sieve. A current of air, independently regulated, passes upward through these tailings as they fall, removing another lot of impurities which would otherwise go to the second number of cloth. Under the head of the second sieve all the middlings from the first sieve can be caught as they are carried around the second sieve by a curved spout, so that the miller can see at a glance whether the first sieve is doing good work. The second sieve has a coarser cloth than the first, and will therefore admit of a strong current of air, as the fine middlings have been taken out. This sieve, like the first, has a roof underneath it to catch the middlings which pass through the sieve. It is pitched in the same direction as the second sieve, or toward the head of the third sieve. The middlings which are too coarse to pass through the meshes of the cloth of the second sieve fall over the tail to the head of the third sieve. Here, as in the other instance, a current of air passes upward through the middlings that fall over the tail and removes another lot of fuzz and impurities that would otherwise go to the next number of cloth. The middlings from the first sieve, that is, those that go through the meshes of the cloth, are carried around the second sieve by a curved spout and follow down the same roof with those that pass through the cloth of the second sieve and are caught at the head of the third sieve. If any impurities are found here, and if the middlings from the first sieve have been regulated, the fault must be in the second sieve, and to remedy it a little stronger draught should be used. The third and last sieve has coarser cloth than the second, and having nothing but the coarse middlings to handle, a very strong current of air can be used. Instead of this sieve having a roof under it, it has a conveyor the full length, with cut-offs every six inches, so that the whole, a part of, or none of the sieve can be used, it being left with the miller to put it with the first middlings, or only a part of it. The tailings come out on the outside of the machine in plain sight, and the good middlings come out at the end opposite to where the tailings pass out. The seconds pass out under the machine.

Over the tail of, and running at right angles with each sieve, are located the air-boxes. They are fastened to the inside frame of the same as the sieves. It may be well to state here that the sieves, roofs, air-boxes and conveyors are all fastened to one frame. This may appear to some as a very heavy machine, but it is much lighter than some machines

which use the same number of feet of cloth. The air-boxes discharge at both ends into air chambers on each side of the machine, settling the heavy dust within, the light fuzz going to the dust room. These air chambers are each eight inches wide, and occupy the space between the posts on the main frame of the machines. The fan is located on the top, out of the way, and the air passes upward in these trunks, with eddies to retard the heavier particles. Motion is given to the inside frame of the machine, by means of an eccentric running against a paper pulley. A spring on the back end of the machine keeps the machine against the eccentrics.

The cloth is cleaned by a snapper fastened to the tail of the sieve, and extending the whole length of it, there being a snapper on each rib of the sieve. The ribs are about six inches apart, and are lined with rubber, to deaden the sound and give the rib additional spring. The larger the machine the more snappers are required. The rubber is placed between the snapper and the cloth to avoid wear. The inventor lays particular stress upon this cloth cleaning device, as he is convinced of its superiority. He exhibited to us a sieve which he assured us had been running for over a year, and it showed no signs either of wear, of being clogged or patted over. Motion is given to the snapper by a block fastened on the belt, passing over pulleys and catching the snapper as it passes the sieves. The force of the blow can be regulated as desired, so as to strike either heavily or lightly.

We have not space to enumerate all the special points of advantage claimed for this machine, though we may add here that these sieves are forty-two inches wide, so that there is no waste of cloth in clothing them. As remarked before, the machine is now in operation in a number of mills, where we are informed it is giving very satisfactory results. We may remark that the fact of the inventor's being an experienced and successful miller, adds no little weight to the claims made for this purifier; but he desires millers to investigate fully all such claims, and will be pleased to furnish them any particulars desired. Those who wish them can obtain further information respecting sizes, prices, etc., by addressing as above, J. T. Walter, Easton, Pennsylvania.

WHAT ROBERT GRIMSHAW C. E. OF PHILADELPHIA, KNOWS ABOUT "MILLING NEEDS AND IMPROVEMENTS."

(From his paper read before the Pennsylvania Millers' Association, Oct. 10, 1882.)
(Continued from November number.)

The buhr-ites raise the claim that the buhr has not been developed and well treated; that it has capabilities ahead, notwithstanding it runs Methuselah-wards so many dusty centuries. These advocates are right. Not one buhr in five; no nor one buhr in ten, in this state nor in any state, is, so well as it might be, adapted in texture, hardness, and dress, to the work it is performing; nor leveled, balanced, driven and speeded so as to do any kind of work as well as it might be done. The roller makers are spurring up the stone-men to better and better work. I have seen in the great mills at Meaux in France, where are made the finest of the flours for the famous bakeries of Paris, 6 foot stones doing work that few mills in this country would not be proud of. In the French burstone quarries at LaFerte and elsewhere, I have noted that about the poorest grades of burr blocks are shaped up by machinery and shipped all ready to put the hoops on after crossing the Atlantic; and I would advise all to "fight shy" of such ready made goods.

Now on the other side. Has the roller mill yet been properly appreciated? Has all the good in it been brought out? Remember, our best millers were stone milling for years before they ever saw a roll. Their habits and touch are educated to the chop from buhrs, while with the machinery of rolls, simply as machinery, they are utterly unfamiliar. Its apparent simplicity is misleading. I know expensively re-fitted mills that, from sheer ignorance on the part of both re-furnishers and millers, are making dead flour, on rolls. I have gone past line after line of rolls that were gnurling themselves to pieces; that were crooked, out of round, badly fed, dulled and chipped, clogged and heated; and yet these same rolls, that would make Gray's or Stevens' hair stand on end, are in mills that sack their flour, in all the glory of red pictures and blue letters, as Extra Roller Patent—which, by the way it isn't because the word "patent" has, in this country, a definite and legal meaning, with a \$400 memorandum to keep any one who misuses it from forgetting that we have at Washington a Patent Office which has the sole right to grant permission to use the word.

So far, concurrent testimony seems to be that the more breaks the more satisfactory the product, considered simply as a product. The softer the wheat the more breaks required. Thus, where Minnesota hard spring takes six breaks by the American system of roller milling, our softer winter grades require seven, and mixed grades having soft wheat in them take as many as all soft.

The trouble is, that making six consecutive breaks with ordinary "9x18" rolls requires a mill of considerable capacity—say 100 barrels per 24 hours at least. An alternative suggested requiring large garnering and elevating capacity, is to make a run on first break, holding the tailings of the scalping reel until the garner is full, then close the first break rolls and run again through the same rolls set closer, using the same scalper, and running the tailings this time to the second pair of rolls, which are grooved to make the third and fourth break in the same way, and so on. This method seems at best but unsatisfactory.

Shorter rolls than 18 inches have the disadvantage that they take practically the same framing, countershafts, pulleys and belts as long ones, and for only two-thirds the capacity; thus being expensive in first cost, space and power.

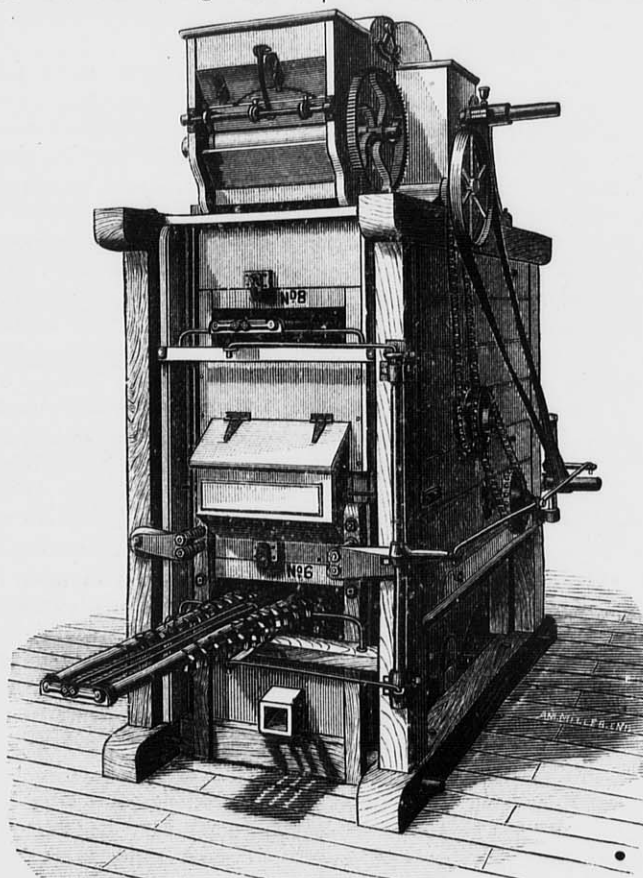
I think that besides the pony break rolls now offered, there will come into favor for mills of 50 to 100 barrels capacity, more consolidated roll frames; that is, having the expense of framing and setting up lessened by having several pairs of short rolls in one frame, each pair with its separate adjustments of speed, pressure and feed.

One point in which rolls come in play is that light powers can be made available and profitable where they could not with buhrs.

On fresh wheats, undoubtedly all rollers succeed better than all buhrs; but there is no reason for any such absolutism.

One of the principal objections to most break rolls is that they break the grain at hap-hazard, "nine ways for Sunday," without any apparent defined intention other than to make several pieces of various sizes, shapes and degrees of magnitude. I believe that larger rolls and larger corrugations, and the same distance between rolls, would do much more and better work. The first opportunity I have, I will try four shallow grooves per inch on the first break, and so on down.

(Since the foregoing was written, Mr. Louis H. Gibson, a most intelligent and successful miller, states that eight flutes work better than ten.)



WALTER'S DOUBLE CURRENT MIDDINGS PURIFIER.

Rollers seem to effect gradual reduction better than any thing else. In bran cleaning they have powerful rivals in the brush and beater machines. For middlings reduction and flouring, the millstone does its work well enough for anybody; and indeed, perhaps, better than rolls. In this matter, circumstances must govern you. If you have good, sharp buhrs, with proper balanced drive, already in the mill, all that need be done will be to suitably change the dress of some of these, and you can do good work. No one need argue that it can't be done for it is done every day. But if the buhrs are soft, open stock, pitted and mended up with alum or with chloride of magnesium, (or worse yet, with melted lead); either keep them for chopping or for corn feed, or roll them out against the side of the mill for relics. Or, they will make fair back door-steps.

It is certain that if the buhrs run on pointed instead of spherical cock-heads and are not absolutely true in face, level, tram, drive and balance, the miller need not expect good results; and he will not get them. This piece of advice may be thought trite. There may be millers who will laugh at it and say that they knew all that. It has been laughed at before by millers who "knew all that" and yet whose own buhrs were lopsided, pitted, winding, ringed, out of tram; not in balance and wobble-driven; making chop that was hot, greasy, uneven, lumpy and killed; who never saw a diamond dresser and never owned a true staff. Such men sometimes make money, it is true, but it is because there is no other mill within 20 miles, and the roads dusty in summer, up to the hubs in winter, and well toll-gated at all seasons.

The rolls must be kept in shape as much as the buhrs. Not that they need it as often, or will so quickly refuse to work at all; but frequent retouching the grooves with a proper machine, will pay. Such a machine should work any style of flutes, with any desired twist and any number per inch or per roll; should be readily controlled by a laborer and not take over one H. P. to dress at the rate of two flutes per minute. This business of sharpening up only for every crop is at best but slouchy.

As to purification, I think that one of our American inventors is rather too sanguine when he talks about purifying flour. I don't say that it can't be done, but it would take a good machine to do it; and it seems to me working in the wrong direction. The object of the middlings purifier was to precede the bolts and some of the reduction machines; to take out specks and germ before they were reduced down so fine as to make their removal more difficult or even impossible. Now carrying out further this idea of an ounce of prevention being worth a pound of cure, the miller and the inventor are pointed towards wheat meal purification, which has been tried in some mills in Virginia and some in the Northwest; and I hear with some fair measure of success. The good of a boy is that he may become a man; and it is not safe to ridicule wheat meal purification, even although low milling has not been yet set up on its legs again by the chop purifier. About the only thing that I have heard of yet, that is absolutely, as well as proverbially, impossible is "to whistle and chew meal at once."

The value of a purifier is not determined by the square feet of cloth it contains, nor by its capacity per square foot per hour; but by its capacity to work your middlings up thoroughly and economically. One machine may work admirably for your rival and yet clog and waste with you and speck the product of a third man.

The purifier had been improved up to a very satisfactory point before the reel and chest received much notice or invention. Still, in bolting, advances seem to be making. These are in three distinct lines: first, the centrifugal dresser, with high capacity; second, the stationary screen with rotating beaters and distributors, with marvellous faculty of changing silks; and third, betterments in the framing of the reel ribs and the stretching of the silk. The improvements in chests are for the most part purely structural, though the cheapness, tightness, and ease of transporting and erecting, make them praiseworthy. At present, attempts are made, and some of them highly successful, to substitute cylindrical for hexagonal reels; to assist the action of these cylindrical reels by outside straps, whips and knockers, and even to throw out the rotating reel and use instead a screw agitator, throwing the chop

GARDEN CITY

Reduction Mills and System

GATHMANN'S PATENT.

Perfection on First Break.

Superior to most, equal to any on Subsequent Reductions.

Every grain of wheat split through the crease, and so thoroughly done that the split kernels can be brushed or scoured.

The Best and Cheapest Reduction Machine and System yet offered.

Substantial, Durable, Noiseless and Light Running, Slow Motion, Large Capacity.

RESULTS GUARANTEED.

TO ROLLER MILLS:

We guarantee to improve your Milling by using our First-Break Machine and System. We split the wheat, and brush the split kernels, thereby making a greater percentage of high-grade flour than can be made under ANY OTHER SYSTEM.

TO MILLERS:

We have fitted up in our factory a room in which we have several of our Reduction Mills running. We cordially invite you to pay us a visit, bring sample of your wheat, give our Machine a thorough test, and judge for yourselves.

GARDEN CITY

WHEAT BRUSH!

Gathmann's Patent "Inclined bristles"

—THE—

ONLY DOUBLE BRUSH

Which can be set up close so that it will

Thoroughly Brush Wheat.

Guaranteed to IMPROVE COLOR of the FLOUR.

It don't break or scratch the grain. Removes all the dust. Very light running. Send for circular and prices.

Prices Reduced!

Improved Garden City

Middlings Purifier!

With Travelling Cloth Cleaners

Our improved Purifier has every device requisite to make it perfect, and every one in use is giving the greatest satisfaction to the users. The Cloth Cleaners are guaranteed to clean the cloth better than is done on any other purifier.

Over 4000 Garden City Purifiers in use, nearly 800 of which are the Improved Machine.

The Best and now the Cheapest. Write for circulars and price list.

We are agents for the

BODMER

Bolting Cloth!

Which has long been acknowledged as the best made, and which has lately been further improved, making it now beyond competition. We make it up in the best style at short notice. Send for prices and samples.

Garden City Mill Furnishing Company,
CHICAGO, ILL.

[Mention this paper when you write us.]

against a single line of stationary silk screens.

These improvements are well worth keeping in view. In bolting, the high art of milling comes into play; for here after all are the most difficult tasks, and the most imperfect and least understood machines in the mill. The average bolting chest is crude and wasteful; of great size, little capacity, and imperfect work. In bolting, the arrangement of cloths, conveyors, slides and spouts should be such as to give all possible chance to make as many grades as possible, should you want them; and then having found by experiment just where to stop for your patent and for each grade made, to get the best market results from that wheat and process, fix the dividing line there, choose your brand, and keep it neither better nor worse right along.

In bolting cloth, it is hard to imagine any need or even chance for improvement in the better grades; and all I can say in this connection is, that there are thousands of square feet of silk, in this section, with are not full count, double twist, square mesh, and even weave, although they are run by some pretty keen business men. There is such a thing as saving ten cents a yard in first cost of silks, and losing many times that amount in wear and tear, and in decreased value of product. There are in the market two or three genuine lines of good grades, and some counterfeits of these; and a few poor grades not worth counterfeiting. See to it that you buy of houses and dealers who are capable judges of the market, and that you get full count, and double twist, smooth, sharp and regular mesh, and no sizing.

The square feet of bolting surface per barrel of flour per hour, is yearly increasing; but luckily the capacity of reels, as well as the quality of their work, is improving, also.

Now I come to a very delicate subject, that of yield; and all I intend to do is to set you thinking. There is such a thing as robbing the low grades too much. There is in the wheat, a certain amount of good stuff which cannot be got out from the offal, and there is a certain amount which it does not pay to try to get out. You may save ten pounds to the barrel, of good, fair flour, showing up well in the yield sheet; but it may have with it two pounds, or even one pound, of discoloring material, that will lower the selling price of that flour double as much as the value of the good stuff saved. To keep the low grade rich enough, is just as much of a problem, as how to get it poor enough; and to follow what the Irishman calls the "middle ixtrame," calls into play the commercial side of milling, as well as the scientific and practical.

You are not milling for gold medals, but for gold dollars. Remember that the true profit in modern milling, is saving. It is a number of net two per cents, carefully saved in various operations, that will make the ten or twenty per cent. which you hope to gain over your neighbor up the stream. The miller who thinks that he can find cleaning machinery which will take out 10 pounds of dirt from a bushel of sixty pounds of wheat, and reduction machinery that will give fifty pounds of sharp middlings from the same original bushel, after the ten pounds of dirt are taken out, will be disappointed. If it costs fifty-six cents to make a barrel of flour from 270 pounds of wheat, worth \$4.50, and 70 cents to make the same stuff from 260 pounds, better not rob the red-dog. If in cost 56 cents to make 196 pounds of flour from four bushels fifty pounds of wheat, and you are able to get the same amount from 4 bushels, thirty pounds at the same price, only by reducing the capacity of the mill 20 per cent.; better make white bran. It is not price, but profit, that should be looked after. It is not a question of how many barrels of flour you can make out of 1000 bushels of wheat, nor how many pounds or barrels of your Pearl, or Lily, or Snowflake, will dough up; but how many ten dollar bills clean net profit you can make out of your mill. In one corner of the state, it may pay best to run the mill for all it is worth in the way of capacity, clearing fifty cents per barrel on 100 barrels of \$7.00 flour rather than sixty cents each on seventy-five barrels at \$8.00. Generally, the increased profit is on the higher grades; but there are so many controlling circumstances that each miller must determine for himself what best suits his wheat, his mill, his market, and his capital.

Fight shy of making too much patent. The word "patent" is as elastic as India rubber used to be when it was pure and good. It means anything from 10 to 60 per cent. of the product. The line for "patent ought to be drawn at some point which would mean that all flour above that grade would dough

up a certain number of pounds to the barrel, to be fixed by agreement in the Millers' National Convention. As it is, the line between patent and next grade is drawn so far down, that it reminds me of cutting a dog's tail off behind his ears. How many of you can lay your hands upon your hearts and say that you can tell what is meant by "patent"? The cut-off slide for "patent" varies with the wheat and the market. "Patent" means anything from 20 to 60 per cent. of whatever the yield may be. It is to the purchaser who has no aleurometer and no skill in doughing up, a variable proportion of an unknown quantity. "Patent" ought to mean something and the same thing all the time. It ought, at least, to mean some certain number of pounds of dough to a barrel of flour.

You remember that one of our humorists liked hash, because he always knew what he was getting. Well, that is about the way with "patent."

The yield must be increased by careful selection, cultivation and preparation of the wheat. When you have struck forty-five pounds of flour per bushel, or to put it better, got seventy-five per cent. yield, then it is time for the farmer to be coaxed or driven into bringing you better, firmer, stronger, heavier, cleaner wheat, with bran that is at once thinner and tougher, and something else besides starch filling. He might also be persuaded to omit some of the garlic, which appears to be a Pennsylvania speciality; and to keep his wire to make tonic of, if he doesn't keep goats.

It is happily to be noted that the percentage of gluten in Fultz wheat is increasing. Those millers who are not farmers should feel good over this, and those who are should feel just as good. I hope that the improvement will be so radical that the signs "No Clawson or Fultz wheat wanted" can be taken down. It is pleasant to those who have been sending to Preston for spring wheat to learn that Kansas winter wheat is in demand in Milwaukee, because spring wheat in Minnesota, Wisconsin and parts of Dakota seems to be running down in hardness.

In the matter of color, in the race for an absolute white, remember that there are known to artists several kinds of white, blue-white, yellow-white, etc.; and that while dark discoloring matters lower the color in one way, and should be discarded because they are innutritious and in fact injurious, you may have a yellow-white flour that will be more nourishing than some that is adjudged a better color; and in fact it may dough up and bake up whiter. This question of color is a deceptive one. You may take a sample of granular flour and divide it into two portions, and reduce one portion finer, and it will have a different color.

When it comes to strength, housekeepers, who are the eventual consumers of most of your product know very little about it, and care less. I have heard "Best Minnesota Gold Medal, Patent Spring," condemned on the ground that it made too hard, dry bread. The housewife had made her mix of dough, using the same proportions of water as with straight winter grades. So that is a memorandum worth making. The average housewife doesn't make good bread; those who do, don't go at it with a pair of scales and a quart measure; so most of your efforts concentrating strength in fancy grades are wasted. It will probably pay you better to try to strengthen the whole yield, up to that point at which you will not get repaid for further improvement. If a barrel of flour that will dough up 392 pounds cost you \$7.00 to make, counting interest and all expenses, and you get \$8.00 for it, there is no commercial economy in making a better grade, to dough up 420 pounds and getting \$7.25 for it, if it cost \$7.50 to make. It is like some of this fancy gardening for cattle-show pumpkins, that are as large as a cart, but cost \$1.00 a pound to raise; or the sorghum sugar that our paternal government succeeded in making at Washington, which cost just \$42.00 a pound to make, exclusive of salaries, wages, rent, etc.

Let me class wheat germ as the great American bug-a-boo. The germ is really among the most nourishing parts of the berry; and unless the flour is to be exported, the more there is of it in flour the richer it is. I know millers who are paying thousands of dollars for alleged germ extractors, and turning right round and buying germs at the drug stores as infants' food for delicate babies and for invalids. The public must be educated not only to buy flour that is not only yellowish by reason of containing the germ, but to prefer it. The same public was educated to eat not only so called "Graham" flour, but uncleaned bran; and even now I see travellers at the

high priced hotels abusing the waiters because there is no bran bread; and that bran bread is made principally out of red-dog and cleaned bran. If they will eat cleaned bran, which is not good for them nor for any animal, they will eat germ flour which is good for them. I will undertake, with the aid of ten notable and ten fashionable physicians, to create a demand for germ flour that will boom it up above your extra best silk sifted, wind wafted, china ground, middlings patent new process flour.

There is much experimenting with proper mixes of wheat of widely differing kinds. All the directions I can give on this point are "Don't." If it is found desirable to grade the different sizes of one kind of wheat (and it assuredly is) it certainly is bad practice to mix widely differing wheats. The buhr-furrows or roller flutes good for the soft wheat will splinter the bran of the hard, and altogether the plan is bad policy. If mixing is to be done, grind the wheat grades separately, and mix the product.

There are few machines that will pay for themselves more rapidly and satisfactorily than a good bran dresser. Any machine which recovers waste cheaply, runs up the profits. A hominy mill is a better paying adjunct to a mill than a corn stone. The dust chamber will be found a valuable adjunct; saving stock, keeping the mill dry and warming and lessening the risk of explosions.

I could never see how in so called tin roofing there was any sense in paying one man \$2.00 a day to chop your alleged tin into 16x 13 1/2 squares, and then hiring two others to turn up their edges and solder them up in a leaky way into strips. Sounds foolish; don't it? Yet how much more economical is it to rip out inch boards into strips, and nail and miter them up into cumbersome spouts that have to be set up nearly dead plum before they will carry anything down, and that paste up and choke, take up half of your floor room and spread fire as if built for the purpose, when you can buy round tin spouting with curved elbows, for less money, and have a tighter, snugger, better and safer job?

In packing and shipping, remember that goods of any kind attractively and securely put up bring a better price and need less advertising than the same put up in ugly packages. There is a good deal in captivating the good wife in each of the thousand homes where your best work is meant to go. An attractive brand often secures a trial. Many of you remember in this connection a story told of an Indian squaw who strolled into a Minnesota mill in those days when the North-West was doing its best to make as good flour as Richmond and Wilmington and Rochester, and had to rely on stencils and red paint to do it—and fell in love with and stole from the bachelor owner a gorgeous flour sack, which she proudly wore around the best streets of the young town, parading herself as "Bartlett's Best choice."

Let me predict the early abolition of the nominal bushel of 60 pounds and the barrel of 196 pounds, and their substitution by common sense hundred weight, easy to weigh and to reckon. The publishers of wheat tables and ready reckoners may pooh-pooh the change, but it is for the millers' and customers' interests, and will come all the same.

In altering small stone mills, remember that the purifier should precede all other changes (of course, after the cleaning has been brought up to a creditable point.) Next may follow brushes or other styles of bran cleaners which will permit higher grinding, giving more middlings and a cleaner, whiter flour. When there is enough purifying and bolting surface and to spare, rolls may be tried on the germ middlings and tailings from the purifiers; the quantity of which will have been increased by reason of the higher grinding which followed the putting in of the bran rolls or machines.

When a contract is given for altering or fitting out a mill, there should be attached plans, diagrams and specifications, showing accurately what is to be done and how, and what result is to be obtained; the yield and quality from a certain grade of wheat, being guaranteed as equal to some stated quantity and standard. And if the price seems to indicate that somebody is going to "get left," the miller will probably find it pays to think that up before signing. The word "guarantee" is about the most abused in the dictionary. Pick up any one of the milling papers and note from two to a half dozen rivals, in each line of articles, each "guaranteed" to be better than all the rest. It reminds me of the three tailors in a London back street. One put up a sign that he was the best in town; the second then advertised that he was the

(Continued on page 27.)

The Geo. T. Smith Middlings Purifier.

LOW IN PRICE,

Quantity and Quality of Work Considered.

Licensed Under all Patents

Owned by the Consolidated Middlings Purifier Company.

Simple, Easily Adjusted,

Two Thousand SMITH PURIFIERS were Sold in 1881.

THE SMITH PURIFIER is in Use in every Milling Country in the World. More than Four Thousand are now running in the United States.

The Smith Purifier has a Positive and Effective Means of Cleaning the Silk of the Sieve. The Smith Purifier has Graded, Controllable Air Currents. It is Impossible to do Good and Economical Work without these Features.

OUR CLOTH TIGHTENER

Makes it both convenient and easy to keep the Silk always properly stretched.

OUR AUTOMATIC FEED

IS POSITIVELY SELF-ADJUSTING AND RELIABLE.

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Centrifugal Flour Dressing Reels

And we are now prepared to fill orders for machines with latest improvements, which include

OUR NEW DOUBLE CONVEYORS,

NEW CLOTH FIXING AND STRETCHING DEVICE,

NEW AND SIMPLIFIED MANNER OF DRIVING.

THE CENTRIFUGAL has more than FOUR TIMES the capacity of the ordinary reel, and will make clear flour and a clean finish on stock that cannot be treated in the common reel without loss, no matter how much silk it is passed over. IT IS ESPECIALLY ADAPTED to handling soft, reground material, full of light impurities, whether from rolls or stone. IT IS INDISPENSABLE to a CLOSE FINISH in any system of gradual reduction milling, and will improve the quality of the low grade flour at the same time it makes the offal cleaner. IT MAKES A CLEAN SEPARATION on caked and flaky meal from smooth rolls, which no other style of reel can do. IT IS VASTLY SUPERIOR to the common reel for dusting middlings. THEY CAN BE USED TO ADVANTAGE as a complete system of bolting, to the exclusion of the ordinary reel.

Over one Hundred sold in six weeks.

REFERENCE TO LEADING MILLERS IN THE UNITED STATES.

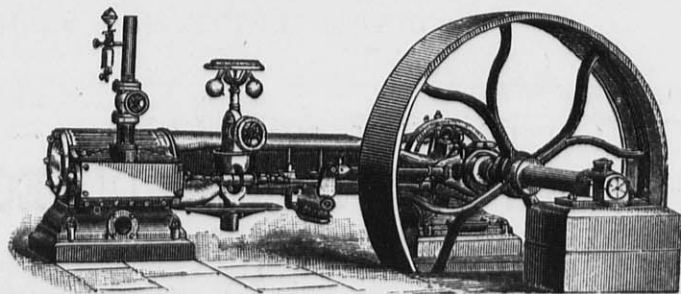
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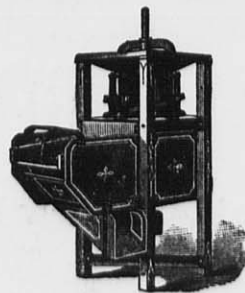
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The only Self-Adjusting Sheller in use that will

SHELL MIXED CORN,

FAST AND WELL,

And that will clean it THOROUGHLY.

Easy of access to all parts liable to clog. Thoroughly made. Sold as cheap as the cheapest. Send for circulars to

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Consignments Accepted.

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PLANS, SPECIFICATIONS & ESTIMATES

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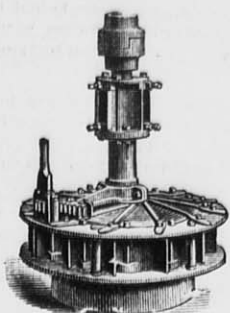
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Made of best materials and in best style of workmanship.

Machine Molded Mill Gearing

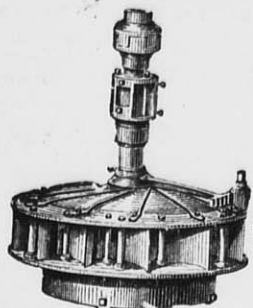
From 1 to 20 feet diameter, of any desired face or pitch molded by our own SPECIAL MACHINERY. Shafing, Pulleys, and Hangers, of the latest and most improved designs.

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NEW PRICE LIST FOR 1881.

The "OLD RELIABLE" with Improvements, making it the Most Perfect Turbine now in Use, comprising the Largest and the Smallest Wheels, under both the Highest and Lowest Heads used in this country. Our new Pocket Wheel Book for 1881 and 1882 sent free to those using water power. Address

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MANUFACTURERS OF THE

American Turbine Water Wheel,

Best Quality French BURR MILLSTONES.

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Flour and Paper Mill Machinery, Best Chilled or Porcelain Rolls for Crushing Wheat and Middlings and

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The AMERICAN TURBINE, as recently improved, is unequalled in the power utilized from a given quantity of water, and is decidedly the BEST "PART GATE" Water Wheel ever known. It has also been otherwise greatly improved.

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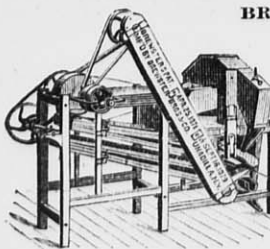
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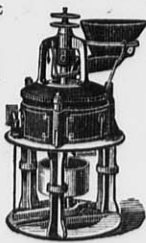
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WM. A. HARRIS, Providence, R. I.

Built under their original patents until their expiration. Improvements since added: "STOP MOTION ON REGULATOR," prevents engine from running away; "SELF-PACKING VALVE STEMS" (two patents), dispenses with four stuffing boxes; "RECESSED VALVE SEATS" prevent the wearing of shoulders on seats, and remedying a troublesome defect in other Corliss Engines, "BABBITT & HARRIS' PISTON PACKING" (two patents). "DRIP COLLECTING DEVICES" (one patent). Also in "General Construction" and "Superior Workmanship."

The BEST and MOST WORKMANLIKE form of the Corliss Engine now in the market, substantially built, of the best materials, and in both Condensing and Non-Condensing forms.

The Condensing Engine will save from 25 to 35 per cent. of fuel, or add a like amount to the power and consume no more fuel. Small parts are made in quantities and inter-changeable, and kept in stock, for the convenience of repairs and to be placed on new work ordered at short notice.

NO OTHER engine builder has authority to state that he can furnish this engine.

The ONLY WORKS where this engine can be obtained are at PROVIDENCE, R. I., no outside parties being licensed.

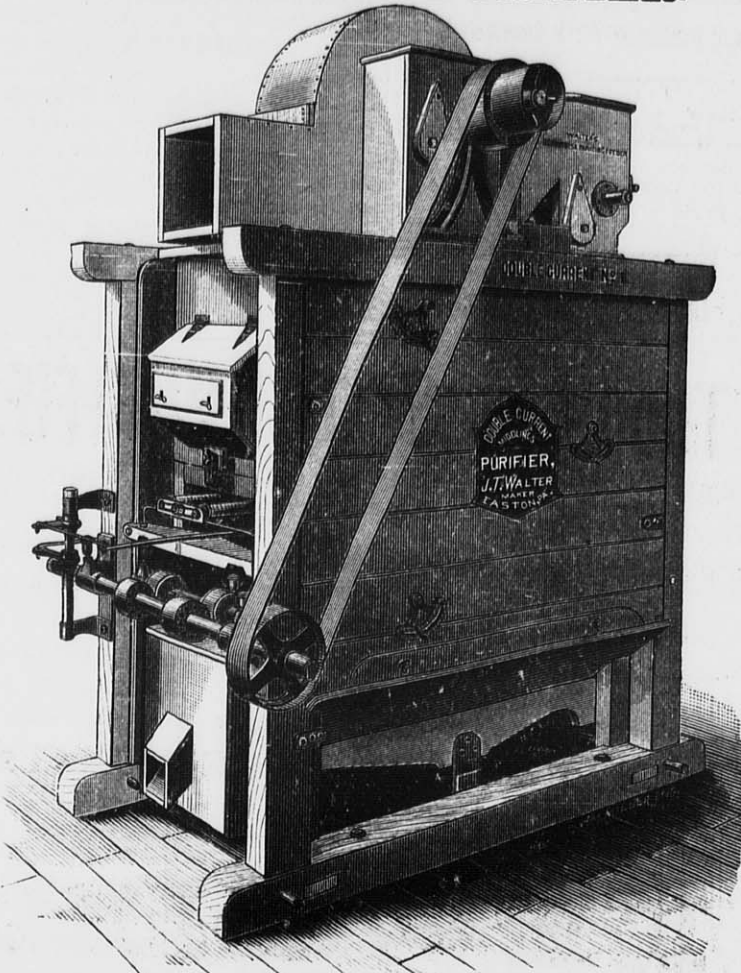
WM. A. HARRIS, Proprietor.

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This Purifier has the following features, which are secured to it by patent, and which no other Purifier can use:

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—Manufacturers of—

RICHMOND'S CELEBRATED

Smut Machines,

Brush Machines,

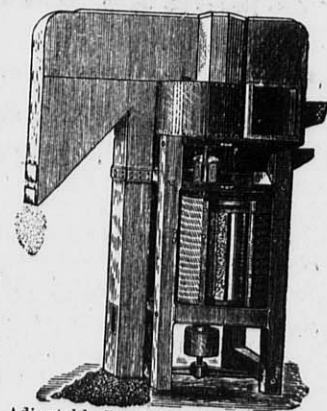
Grain Separators,

and Bran Dusters.

Nearly Two Hundred of these Machines are now in operation in the city of Minneapolis, Minn., alone, and more than sixty in the city of Milwaukee, Wis. They are also extensively used in many other sections, both on Winter and Spring Wheat.

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(Continued from Page 24.)

best in the world; while the third then simply notified the people that he was the best in that street. Have nothing to do with any such comparative guarantee. What you want to know is *how much* and *how good* work the engine or machine, or whatever it is, will do.

I hardly need speak of the great desirability of taking an interest in the literature of your ancient but progressive craft, and of exchanging ideas through the columns of the official organ of your growing and profitable Association, and of other reputable milling journals. The catalogue of failures is as instructive as the record of successes; perhaps more so. Hence if any of you have tried some certain machine or process and found it wanting, let your fellow-members know the facts and the reason why; and if you don't know the reason why, perhaps some one else can tell you.

And now in conclusion, let me hope that your meeting and discussion will be productive of benefit in a social and commercial way; that your mutual acquaintance and united action will result in better work and better profits and in pleasant friendships. Come next year to the Convention; and don't any of you come alone. Let these Conventions be occasions not only of discussions of grave matters of trade and business, but opportunities for wives and daughters to travel and meet each other.

[Concluded.]

NEWS.

THORNBERG & SMALL are adding Nordyke & Marmon's rolls to their Martinsville (Ind.) mill.

MR. H. J. Klingler, of Butler, Pa., has recently put in Messrs. E. P. Allis & Co.'s roller-outfits.

THE Case Mfg. Co., Columbus, O., are furnishing C. Miller, Milton, Iowa, with smooth rolls.

I. Q. Halteman & Co., of St. Louis, Mo., have lately put in two pairs of Allis Rolls in Gray's noiseless frames.

J. J. PLANK & Son, Pulaski, have sent their order to the Case Mfg. Co., Columbus, O., for one set of smooth rolls.

STOUT Bros. of Emporia, Kans., have put in some new machinery, furnished by the Case Mfg. Co., Columbus, O.

THE Case Mfg. Co., Columbus, O., are furnishing Allen Lininger & Co., Brighton, Iowa, with some new machinery.

MESSRS. MATTHEWS BROS., of Anamosa, Iowa, have lately put in two pairs of Allis rolls in Gray's Noiseless frames.

THE Case Mfg. Co., Columbus, O., have recently furnished Henry C. Lamb, of Denison, Iowa, some new machinery.

C. A. Pardee, of Colesburg, Ky., has placed an order for a mill outfit with Nordyke & Marmon Co., of Indianapolis, Ind.

WILLY & Co., Appleton, Wis., have recently added one first Break Machine, furnished by the Case Mfg. Co., Columbus, O.

D. W. Dinius, of Etna Green, Ind., has put in a line of Allis Rolls in Gray's noiseless frames, from E. P. Allis & Co. of Milwaukee, Wis.

HENRY Reinhart, Wall Lake, Iowa, has ordered one 9x18, four Roller Mill, for Bran & Germ, from the Case Mfg. Co., Columbus, O.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., have put in a line of rolls in Gray's noiseless frames, for Mr. J. T. Walters, of Easton, Pa.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have lately shipped to O. F. Barber, of Golden, Cal., two pairs of Allis Rolls in Gray's noiseless frames.

H. KEPPEL & Son, of Zeeland, Mich., have put in two pairs of rolls in Gray's noiseless frames, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., recently sold Mr. J. S. Oborn, of Shellsburg, Iowa, two pairs of Allis rolls in Gray's noiseless frames.

THE Shepard Hardware Co. of Buffalo N. Y. recently purchased an 18x42 Reynolds Corliss engine of Messrs. Edw. P. Allis & Co. of Milwaukee, Wis.

MILTON E. Briggs, has put in a roller outfit, purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis., for James Gambrell, of Frederick, Md.

THE Case Mfg. Co., Columbus, O., are furnishing the Brookville Mill Co., Brookville, Kans., with Break Machines, Scalping Reels, Rolls, Purifiers, etc.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., lately put in two pairs of Allis Rolls in Gray's noiseless frames, for Mr. J. T. Williams, of Roscoe, Ohio.

GEO. A. Klingen, of St. Charles, Mo., recently put in two pairs of Allis Rolls in Gray's noiseless frames, from E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., recently sold Mr. Ferd. Schumacher, of Akron, Ohio, a pair of 22x48 Reynolds Corliss engines, for his new mill.

MILES & LENHART, West Mill Grove, Ohio, have placed their order with the Case Mfg. Co., Columbus, O., for reduction machines, smooth and corrugated rolls.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently sold Mr. J. S. Oborn, of Shellsburg, Iowa, two pairs of their Rolls in Gray's noiseless frames.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently shipped four of their Rolls in Gray's noiseless frames to the Iowa Iron Works Co., of Dubuque, Iowa.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have shipped to San Francisco, fifty-eight pairs of Rolls, for a large mill in California, all in Gray's noiseless frames.

OTTO ZARGES, of Dugway, N. Y., has recently fitted up his mill with Rolls and gradual reduction machines, purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MR. W. E. Partlow, of Greenville, Mich., has recently put in two pairs of Allis rolls in Gray's noiseless frames, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis.

The old established milling firm of the D. Suppinger & Co., at Highland, Ill., has concluded to drop the old system of milling, and will at once commence the erection of a 350-barrel roller mill. After a searching investigation of

the different systems, they have concluded to adopt the rolls and machinery made by Nordyke & Marmon Co., of Indianapolis, Ind.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently put in two pairs of Allis Rolls, in Gray's noiseless frames, for Camp Spring Mill Co., of St. Louis, Mo.

THE mill of J. G. Wolf & Co., at Morristown, Ind., is being remodeled to the new process, using machinery made by Nordyke & Marmon Co., of Indianapolis, Ind.

THE Winona Mill Co., Winona, Minn., after using a number of the first Break Machines from the Case Mfg. Co., Columbus, O., have ordered two more, by telegraph.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently furnished Messrs. J. Wagner & Co., of San Francisco, with one of their Roller outfits, in Gray's noiseless frame.

MESSRS. CHISHOLM BROS. & GUNN, of Minneapolis, Minn., have recently ordered sixty-one pairs of Allis Rolls in Gray's noiseless frames, for mills that they are building.

MESSRS. D. B. MERRILL & Co., of Kalamazoo, Mich., recently ordered an Allis Roller outfit in Gray's noiseless frame, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis.

M. T. Boulton, of Appleton, Wis., has put in ten pairs of Allis Rolls in Gray's noiseless frames, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis.

MESSRS. E. T. ARCHIBALD & Co., of Dundas, Minn., have lately ordered two pairs of Allis Rolls in Gray's noiseless frames from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. G. & W. TODD & Co., of St. Louis, Mo., have recently ordered six pairs of Allis Rolls in Gray's noiseless frames, from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently shipped to San Francisco, fifty-eight pairs of rolls for a large mill in California, all in Gray's Noiseless frame.

OTTO ZARGES, of Dugway, N. Y., has recently fitted up his mill with rolls and gradual reduction machines, purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently sold two pairs of porcelain rolls in Gray's Noiseless frames, to Messrs. A. G. Godshall & Bro., of Lansdale, Pa.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently furnished Messrs. J. Wagner & Co. of San Francisco, with one of their roller outfits in Gray's Noiseless frame.

MR. J. V. FARWELL, of Chicago, Ill., recently purchased a 24x48 Reynolds Corliss engine, from Messrs. Edw. P. Allis & Co. of Milwaukee, Wis., to drive an electric light plant.

THE HANOVER MFG. CO., of Hanover, Ill., recently placed their order with Messrs. E. P. Allis & Co., of Milwaukee, Wis., for two pairs of Allis rolls in Gray's Noiseless frame.

H. C. BARRY & SON, of Waukegan, Ill., lately improved their mill by putting in two pair of rolls in Gray's noiseless frames, purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. C. A. DONNELL & Co., of Conway, Iowa, have recently made improvements in their mill by putting in Rolls in Gray's noiseless frames, from E. P. Allis & Co., of Milwaukee, Wis.

MR. HENRY KRITZER, of Newaygo, Mich., has lately improved his mill, and added a Roller outfit in Gray's noiseless frame from Messrs. E. P. Allis & Co.'s Reliance Works, Milwaukee, Wis.

THE ELKHORN MILL CO., of Boonville, Ind., have recently put in an Allis Roller outfit, in Gray's noiseless frames same purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

THE COCKLE SEPARATOR MFG. CO., of Milwaukee, Wis., recently placed their order with Messrs. E. P. Allis & Co. of same place for twenty pairs of Allis rolls, in Gray's Noiseless frames.

THE Case Mfg. Co., Columbus, O., have taken the contract of Dye & Weller, Troy, O., for a full gradual reduction mill, of Breaks, Rolls, Purifiers, Scalping-Reels etc. on the Case system.

CHARLES SEMMERN, Belmont, Wis., is improving his mill by the addition of Break Machines and Scalper, smooth and corrugated Rolls, furnished by the Case Mfg. Co., Columbus, O.

THE Pond Engineering Co. of St. Louis, Mo., recently put in a 12x30 Reynolds Corliss Engine, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis., for Mr. John Schaub, of Grand Island, Neb.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., lately put in one of their gradual reduction machines and four pairs of rolls in Gray's Noiseless frames, for Mr. Geo. Wall, of Staceyville, Iowa.

W. PAGEL, of Alden, Iowa, is changing his mill and putting in two gradual reduction machines and two pair of rolls in Gray's Noiseless frames, from Messrs. E. P. Allis & Co., of Milwaukee, Wis.

MESSRS. BROWN BROS., of Stevens Point, Wis., recently purchased from Messrs. Edw. P. Allis & Co. of Milwaukee, Wis., one of their 20x42 Reynolds Corliss Engines, to run their saw mill at that place.

A gradual reduction mill will be built at McKeesport, Pa., for Drew & Davis. The Nordyke & Marmon rolls and machinery will be used throughout. The capacity will be 125 barrels per day.

THE Case Mfg. Co., Columbus, O., have been awarded the contract of Geo. L. Hays, Picketon, O., for a full gradual reduction mill, of Breaks, Rolls, Purifiers, Scalping Reels, etc., on the Case system.

HANAVALT & Co., Tipton, Mo., have placed their order for Breaks, Rolls, Purifier, Scalping Reels etc., for a full gradual reduction mill, on the Case system, with the Case Mfg. Co., Columbus, O.

MESSRS. SIEBERLING BROS., of Akron, Ohio, lately placed their order with Messrs. E. P. Allis & Co., of Milwaukee, Wis., for a 24x48 Reynolds Corliss engine, for their new flouring mill at that place.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., recently sold Mr. W. Deering of Chicago, Ill., one of their 24x48 Reynolds Corliss Engines to run his extensive harvester works at that place.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., have recently put in nine pairs of their rolls in Gray's noiseless frames, for Messrs. Snively & Hedges, of Wathena, Kas.

THE HUDNUTS, of Terre Haute, Ind., recently put in six pairs of rolls in Gray's Noiseless frame, purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis., to grind corn in their hominy mill.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., are putting in an entire line of Allis Rolls, in Gray's noiseless frames, for Mr. W. Banning of Mt. Vernon, Ohio. Outfit includes eight pairs of Allis Rolls.

A contract has been entered into, by which the Chicago, Milwaukee & St. Paul Railroad, transferred Oct. 1, to the Pullman Company, the control and management of their entire sleeping car system, covering over 4,000 miles of

road. This contract completes the line by which a continuous system of Pullman cars will be established between New York and Portland, Oregon.

MESSRS. Wardell & Hinkley, of Chicago, Ill., recently ordered a 14 by 36 Reynolds Corliss engine of Messrs. Edw. P. Allis & Co., of Milwaukee, Wis., for Messrs. Thorsen & Tallakson, of Chicago, Ill.

THE mills of Thos. Hallown of Grant, Iowa, and McCullough, at Walnut, Kan., are both being remodeled to the new process by the mill-furnishers, Nordyke & Marmon Co., of Indianapolis, Ind.

A new flouring mill is being built at Lucas, Mo., containing three buhrs. The proprietor, Mr. Taylor, is having his machinery made to order at the Nordyke & Marmon Works, at Indianapolis, Ind.

THE mill of Little, Lilly & Co., at Littleton, Col., ranks among the largest and best in that state. They are adding Nordyke & Marmon's rolls, centrifugals, etc., to enable them to keep their mill at the front.

MR. W. M. SHOOK, of Canton, Ohio, recently ordered from Messrs. E. P. Allis & Co., of Milwaukee, Wis., two pairs of Allis rolls in Gray's Noiseless frames, for H. J. Sonnen & Bro., of Canton, Ohio.

THE Case Mfg. Co., Columbus, O., have taken the contract of Wm. Foreman & Bros., Circleville, O., for Rolls, Breaks, Purifiers, Scalping Reels, etc., for a full gradual reduction mill, on the Case system.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., recently sold a 12x36 Reynolds Corliss engine condenser, and Reynolds patent feed water heater to Coman & Morrison, for their new flouring mill at Fox Lake, Wis.

WILLEY & Moore, Lockport, N. Y., are changing their mill to the gradual reduction system. They have placed their order with the Case Mfg. Co., Columbus, O., for Rolls, Breaks, Purifier, Scalping Reels, etc.

MESSRS. E. P. ALLIS & Co. are remodeling the mill of Messrs. J. Stoltz & Co., at Pekin, Ill., and putting in eight pairs of Allis Rolls in Gray's noiseless roller frames, together with a large amount of other machinery.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have lately furnished Messrs. C. B. Slater & Co., of Blanchester, Ohio, two pairs of Allis Rolls in Gray's noiseless frames, for a mill which they have under construction.

THE Minneapolis Harvester works of Minneapolis, Minn., lately put in a Reynolds pat. Feed Water Heater, to go with the engine, purchased from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis., a short time ago.

F. S. Johnson & Co.'s flouring mill and elevator, at Milford, Neb., were burned last week. There were about 5,000 bushels of wheat in store, which was entirely destroyed. The total loss is over \$100,000; fully insured.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., lately furnished the Great Western Manufacturing Co. of Leavenworth, Kas., three pairs of Allis Rolls, in Gray's noiseless frames, for jobs that they had under construction.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently furnished Messrs. Aylsworth & Co. of Fostoria, Ohio, with one of their roller outfits in Gray's noiseless frame, and one of their gradual reduction machines.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., recently put in three pairs of their Rolls in Gray's noiseless frames for Messrs. Ramsdells & Hopkins, of Tama City, Iowa, and furnished other machinery for remodeling their mill.

J. G. Patton, head miller for J. Schofield, of Dunlap, Iowa, has concluded to embark in the milling business on his own account. His mill machinery is being built to order by Nordyke & Marmon Co., of Indianapolis, Ind.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., recently put in a Reynolds patent feed water heater for the Madison City Water Works, at Madison, Wis., to go with the Reynolds Corliss engine furnished them some time since.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., recently filled an order for three pairs of Allis rolls in Gray's noiseless frames, and one of their gradual reduction machines, for the Madelia Mill Co., of Madelia, Minn.

MR. J. L. ALLARD, of Paducah, Ky., has lately put in two pairs of Allis Rolls, in Gray's noiseless frames, purchased from E. P. Allis & Co., of Milwaukee, Wis. This is in addition to the Allis Rolls put in when he remodelled his mill.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., lately furnished the Kenton Paper Mill Co., of Kenton, Ohio, one of their Reynolds patent feed water heaters, to go with the Reynolds Corliss engine they sold them some time since.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., have the contract for remodeling the mill of Messrs. Dexter & Bridge Bros., of Whitewater, Wis., and the outfit will include twelve pairs of Allis Rolls in Gray's noiseless frames.

GOLD & SHAW, New Windsor, Ill., are changing their mill to the gradual reduction system. They have placed their order with the Case Mfg. Co., Columbus, O., for the Case system of Break Rolls, Purifiers, Scalping Reels, etc.

JORDAN, ESTUS & Patrick, who are operating the mill at Louisiana, Mo., are getting roller mills and machinery from Nordyke & Marmon Co., of Indianapolis, Ind., with which to remodel their mill to the gradual reduction system.

THE proprietors of the large roller mill at Sweetwater, Tenn., (which is being built by Nordyke & Marmon Co., of Indianapolis, Ind.) have decided to add sufficient more rolls and other machinery to increase the capacity to 200 barrels.

L. Schrambling of Victor, N. Y., has recently put in a gradual reduction machine and two pairs of Allis Rolls in Gray's noiseless frames, from E. P. Allis & Co., of Milwaukee, Wis. This will nearly complete his outfit for a roller mill.

A mill was built at Silverdale, Ind., for J. E. Kern several years ago by Nordyke & Marmon Co., of Indianapolis, Ind. It is now to be enlarged, and when completed will contain all improvements in milling introduced during late years.

MR. R. RUSTON, of Evansville, Ind., recently purchased from Messrs. E. P. Allis & Co., of Milwaukee, Wis., two pairs of their Wegmann Porcelain Rolls in Gray's noiseless frames. Mr. Ruston has replaced nearly all his millstones with porcelain rolls.

THE Warren Mfg. Co. of Warren, Mich., lately ordered a 14x36 Reynolds Corliss engine, and a Reynolds patent feed water heater, from Messrs. Edw. P. Allis & Co., of Milwaukee, Wis., for their new flouring mill. They also use a full line of Allis rolls.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., have the contract for remodeling the mill of C. Link, of Charleston, Ill., which among other things contains three pairs of Allis rolls in Gray's noiseless frames, and two of Gray's gradual reduction machines.

Jos. Gebhart & Sons, Dayton, Ohio, who have been running some months on the Case system of reduction, furnished by the Case Manufacturing Co., Columbus, O., have ordered from the same Co. two sets, 9x18, 4-roller smooth Rolls, for reducing middlings, throwing out their Buhrs. They will now have a full Roller Mill.

MR. GEO. MADER of Winchester, Ill., recently put in two pairs of Allis rolls in Gray's Noiseless frames, in his mill; same were from Messrs. E. P. Allis & Co's Reliance Works, Milwaukee, Wis.

MR. J. L. ALLARD, of Paducah, Ky., has lately put in two pair of Allis rolls in Gray's Noiseless frame, purchased from E. P. Allis & Co., of Milwaukee, Wis. This is in addition to the Allis rolls put in when he remodelled his mill.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., recently furnished A. P. Ordway & Son, of Beaver Dam, Wis., with five pairs of their rolls in Gray's Noiseless frame. Messrs. Ordway & Son, have several contracts for remodeling mills in their section.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently furnished the entire outfit for remodeling the mill of Messrs. Hinman & Ward, at Battle Creek, Mich. The outfit includes twelve pairs of Allis rolls in Gray's patent Noiseless Belt frames.

MR. D. J. TEW, of Rushford, Minn., has just put in four pairs of Allis Rolls in Gray's noiseless frames, bought of Messrs. E. P. Allis & Co., of Milwaukee, Wis. This gives him a full roller outfit. Mr. Tew is one of the most progressive millers in southern Minnesota.

MR. Geo. Sprague, of Waterford, N. Y., recently placed an order with Messrs. E. P. Allis & Co., of Milwaukee, Wis., for two of their gradual reduction machines, and, four pairs of Allis Rolls in Gray's noiseless frames. He is changing his mill to the roller system.

J. B. A. KERN, of Milwaukee, Wis., has recently purchased four pairs of Allis Rolls in Gray's noiseless frames, from Messrs. E. P. Allis & Co. of Milwaukee, Wis. If everything goes on as intended, Mr. Kern will soon have the largest mill in the world.

MESSRS. E. P. ALLIS & Co., of Milwaukee, Wis., have recently furnished Mr. F. Richards, of Elgin, Ill., with two of their gradual reduction machines, and two pairs of Allis Rolls in Gray's noiseless frames. Mr. Richards is remodeling his mill to the roller system.

MR. JNO. REAM, of Hagerstown, Md., recently visited Milwaukee and left his order with Edw. P. Allis & Co., for one of Gray's gradual reduction machines. This machine is an entirely new design and makes four reductions and four separations complete in one machine.

MR. B. F. GUMP, of Chicago, Ills., recently ordered from Messrs. E. P. Allis & Co., of Milwaukee, Wis., four pairs of Allis rolls in Gray's Noiseless frames, for one of his customers. Mr. Gump, is doing an extensive mill-furnishing business and is putting in Allis rolls.

MESSRS. Mast, Troyer and Huffman will erect a full Gradual Reduction Mill at Buena Vista, Tuscorawas Co., Ohio, during the coming spring. They have placed their order with the Case Mfg. Co., Columbus, O., for a full line of Breaks, Rolls, Purifiers, Scalping Reels etc. etc.

A cylinder for grain scourer, invented by Lyman Morgan, Port Washington, Wis., is composed of staves cast with wedged-shaped ridges extending spirally around its interior, and rounded ridges falling short in height of the wedge-shaped ridges and running lengthwise of the cylinder.

MESSRS. C. & A. LUCKENBACH, of Bethlehem, Pa., have recently placed their order with Messrs. E. P. Allis & Co., of Milwaukee, Wis., for two of their gradual reduction machines and six pairs of Allis rolls in Gray's Noiseless Frame and two pairs of porcelain rolls in Gray's frames.

THE Beaver Dam Cotton Mills, of Beaver Dam, Wis., recently put in one of Edw. P. Allis & Co's 22x48 Reynolds Corliss Engines, and a Reynolds patent Feed Water Heater, to go with the engine. This is the second Reynolds Corliss engine they have purchased from Messrs. Edw. P. Allis & Co.

MESSRS. EDW. P. ALLIS & Co. of Milwaukee, Wis., have lately furnished Mr. Geo. C. Goetting, of Altamont, Ill., with six pairs of Allis rolls in Gray's noiseless frames. Mr. Goetting was formerly of the firm of I. Q. Halteman & Co., St. Louis, Mo., but has withdrawn to go into the milling business.

MESSRS. EDW. P. ALLIS & Co., of Milwaukee, Wis., have recently sold Messrs. Helmer & Cook, of Fond du Lac, Wis., a 12x36 Reynolds Corliss engine and Reynolds' patent feed water heater for their new flouring mill. Messrs. E. P. Allis & Co. also furnished a full line of their celebrated rolls for this mill.

MESSRS. E. P. ALLIS & Co. of Milwaukee, Wis., recently put in six pairs of Allis rolls in Gray's Noiseless frames, for Messrs. E. Sanderson & Co. of same place. The Sanderson mill is gradually edging towards a foremost place among the largest mills in the country and is equipped throughout with Allis rolls.

MR. DAN J. FOLEY, head miller of the new roller mill at East St. Louis, reports the new mill as running, though not quite as smoothly yet as it will in the course of a few days. This mill is built under the Stevens patent and process, and Mr. Foley, with his able assistants, Wm. Woodley and Jas. Clarke, will make her "pan out" all right.

AN improved grinding mill has been patented by Mr. George W. Wilson of Lanesboro, Minn. The improvement relates to mills for cracking and flouring wheat and other grain, and consists in the combination with the runner of rolls and drags inserted in radial recesses in the runner between the rolls, and provided on their lower edges with inclined teeth.

AN improved flour bolting machine has been patented by Mr. Ammi R. Smith, of Maroa, Ill. The invention consists in the combination of a separating reel, a return reel and a finishing reel, and suitable conveying devices connecting them, all arranged to first separate the bran, shorts and coarse middlings from the flour and fine middlings, and then to spout the shorts and coarse middlings to the return reel, it being carried thence to the finishing reel.

The Commercial, Winnipeg, Manitoba, says: Mr. Wm. Ogilvie of the Ogilvie Milling Co., has been making a tour of inspection over the different lines of the C. P. R. with a view of establishing a regular elevator system at the most suitable points, for the purchase of wheat for the company's mills, and for shipping to Eastern points. Exactly where these elevators are to be located, we are not in a position to state, but we have been furnished with an outline of the plans of the company. At Winnipeg they will erect one elevator of from 75,000 to 100,000 bushels capacity. Along the main line at different points west of this they will have five or six smaller elevators, and at different points on the Southern branch either three or four others. Each country elevators will have a capacity of from 30 50,000 bushels, and all will be furnished with steam power and the most modern appliances for grain cleaning purposes. The contracts for the construction of all will imply their being finished and ready for operation by the fall of 1883, so that the next year's crop can be handled as soon as threshed. The whole system when finished will supply storage for over 350,000 bushel of grain. The Point Douglas mills of Ogilvie & Co. at Winnipeg, could, if running full for 300 days in the year, use up nearly 1,000,000 bushels of wheat annually, so that the projected elevator system will be all required to furnish a supply for these mills.

A company has purchased the site of the old mill that was carried away by floods in the spring of 1881, at Sioux Falls, Dakota, and will erect a new mill of large capacity, in the spring of 1883.

The following parties have bought the Becker Wheat brush during the past few days—made by the Eureka Mfg. Co., of Rock Falls, Ill.: Jno W. Diels & Son, Scribner Neb., Morris & Martin, Reed City, Mich., Smith Stratton & Co., Nashville, Tenn.; Whitney Bros., Glassboro, N. J.; A. Dehner & Co., St. Louis, Mo.; R. Barr & Sons, St. Jacobs, Ill.; Barsteler, Taugeman & Co., Tallmage, Neb.; Moun- tel, Borgers & Co., East St. Louis, Ill.; Pauels & Van Patten, Holland, Mich.; Hagerty Hunter & Co., Peoria, Ill.; Geo. S. Young, Boynton Mills, Pa.; David Suppinger & Co., Highland, Ill.; E. P. Allis & Co., Milwaukee, Wis.; Nordyke & Marmion Co., Indianapolis, Ind.

The San Francisco Journal of Commerce, in an article descriptive of the thriving city of San Jose, has the following item of milling news: "Since 1851 Moody's Mills have been one of the landmarks of Santa Clara valley. In that year R. G. and Volney D. Moody commenced in a small way the manufacture of flour. They continued until 1862, when R. G. Moody retired, being succeeded by his sons Charles and D. B. Moody. In 1866 Volney D. retired and the mills were conducted until this year by Charles and D. B. Moody, when the former retired and the entire business is now under the sole control of D. B. Moody. Mr. Moody has just erected a large addition to this mills, put in entirely new machinery and will, in a few weeks, be prepared to manufacture as fine a quality of new process flour as is made on the Coast. His machinery is perfect, and in addition to regular grades of flour he is preparing to manufacture cracked wheat, hominy, pearl barley, buckwheat flour and all kinds of feed. He has also a large fire-proof warehouse, where he is prepared to store all kinds of produce. When in running order Mr. Moody will have one of the finest mill properties on the Coast, and the Moody Flour will in the future as in the past stand foremost among the celebrated brands of the Coast."

J. H. Redfield, of Salem, Ind., the well known manufacturer of middlings purifiers, reports trade excellent and gives the following partial list of sales during the past month: S. S. Stublin & Co., Paris Crossing, Ind., machinery for complete mill job; N. E. Nelson, Shelbyville, Ind., bolting cloths and other machinery; A. J. Cravens, Hardinsburg, Ind., purifiers and bolting cloths; E. Snyder, English Centre, Pa., purifiers and other machinery; Ewing Mill Co., Ewing, Ind., bolting chests and other machinery to increase capacity of their mill; Jonathan Turley, Lawrence Port Mills, Ind., machinery for complete mill; H. Lambert, Wheeler, Ill., bolting cloths, purifiers, etc.; R. Clark, Little York, Ind., bolting cloth and other machinery; E. Springer, Elizabethtown, Ind., wheat cleaning machinery, bolting cloths, etc.; Polly Bros., Amboy, Nebraska, bolting cloths, etc.; P. N. Attland, Mount Wolf, Pa., bolting cloths, etc.; H. M. Clark, Knoxville, Tenn., purifiers and other machinery; J. W. Holmes, Medora, Ind., mill machinery; W. N. Yorsueh, Somerset, Kas., machinery complete for one mill; Beardsley & Lenfester, Waldron, Ill., complete mill job; L. Y. Davis, Harrisburg, Ind., machinery complete for a 2-run mill; John C. Vayles, bolting cloths, etc.; Matthew Bros., Sattillville, Ind., mill machinery.

The Topeka Mill and Elevator Co., of Topeka, Kas., recently started up their new mill. The building is 50x62 feet on the ground, and six stories high. The lineal oil mill is 35x50 feet on the ground, and three stories high. Both of these buildings are of brick, and each has a twelve-foot basement. The elevator, standing between, covers 35 feet by 100 feet. It is of wood, but is covered on the outside by corrugated iron, which furnishes ample protection against fire. It contains fifteen bins and has an aggregate capacity of 60,000 bushels. All grain and seed is delivered in the basement, whence it is elevated to the bins by Chase's patent elevators, which are able to dispose of a carload in ten minutes. This is faster than the grain can be put out by hand. With five shovellers in a car the elevator will keep the bin clear, let them do their best.

The mill has 13 sets of rolls; 5 of which are corrugated, 5 porcelain, and 3 smooth iron. The power is furnished by a Reynolds-Corliss engine. The machinery was furnished throughout by E. P. Allis & Co., of Milwaukee, and the mill was arranged on plans of W. D. Gray, patentee of a large part of the apparatus. The force is not yet entirely organized, but Mr. Eckle, late of Milwaukee, has been definitely selected as head miller and is now in charge. The engine room will be under the direction of H. H. Woodruff and W. D. Dozer.

The buildings and machinery as they now stand, represent an investment of \$90,000. This is not, however, the whole amount involved, as the other sums required to carry on the operations of the company bring the total up to \$150,000 or more. The flouring mill is capable of producing from 200 to 250 barrels a day—it is guaranteed to make 200 barrels in a run of 23 hours. It is not at present running on full time, but will soon be at work from Monday morning to Saturday night continuously.

The building is fitted throughout with speaking tubes, communicating with the first floor.

It is intended to turn out three grades of flour, which will be known respectively as "Liber Patent," "Hackney Patent," and "Baker's Choice."

C. F. MILLER, of Mansfield, O., sends us the following partial list of orders lately received for flour mill goods: Reuben Werstler, Cairo, O., for a corn mill, corn sheller, mill picks, belting, etc.; Fawson & Wherry, Cardington, O., belting and pulley; Samuel Beck, Spring Mountain, O., bolting cloth; middlings purifiers and other materials, including shafting, gearing and millwright work for a new outfit complete; Peter Wintz, Spring Mills, O., mill separator, bolting cloth and other goods; George Taylor & Son, Sycamore, O., two California wheat cleaning machines; Hardesty Bros., Columbus, O., two Sergeant mill burr drivers; John Sutherland, Vienna, Pa., bolting cloth and other materials; R. G. Mills, Cardington, O., bolting cloth, mill stone curb and other goods; Messrs. Trowbridge & Son, Chesterville, Ohio, bolting cloth; Messrs. Hegbee & Co., Bellevue, O., roller mills, chain belt and other materials; Messrs. John Pearch & Son, Sharrodsville, O., for middlings mill, bolting cloth, belting, etc.; A. A. Newkirk, Baden, Pa., one Silver Creek flour packer; Amstutz & Co., Annville, O., wheat cleaning machines, magnetic separator and other goods; Heable Bros., Attica, O., for bolting cloth; Messrs. House & Dawson, Mt. Zilead, O., bolting cloth; Messrs. Lebold & Boelm, Sandyville, O., for bolting cloth, new bolting chests, machines and materials; James A. Gysen, Washington, O., for a brush smutter, wheat heater and other materials; Allen Werstler & Bros., Brimfield, O., for a corn and feed mill, corn and cob crusher, a centrifugal corn sheller, shafting, gearing, pulleys and other materials; Messrs. Mills & Swegart, Coshocton, O., for bolting cloth and other goods; H. Goudy & Co., Maysville, O., for roller mills, purifiers, wheat cleaning machines, new bolting chest; bolting cloth, shafting, gearing, pulleys, belting, a new outfit complete; Messrs. Cassell & Co., Zanesville, O., for bolting cloth; L. Mohn & Son, Olivesburgh, O., for a California brush smutter, bolting cloth etc.; L. G. Gilbert,

Esq., New London, O., 14 pairs Stevens rolls, new bolting chests, middlings purifiers, wheat cleaning machines, bran dusters, flour packers and other materials to constitute a complete roller mill; F. E. Lemert & Co., Adams Mills, O., one No. 2 Garden City reduction mill, for 1st break with brush scalper for same, a large lot of bolting cloth and other materials; Messrs. Morrow Bros., Prospect, O., for a full line of new machines, embracing Stevens rolls, a Garden City reduction mill for 1st break, a new bolting chest, a large lot of bolting cloth, middlings purifiers, wheat cleaning machines, centrifugal reels, flour packer, shafting, gearing, pulleys, belting, elevator cups, a complete new outfit.

THE UNITED STATES MAIZE CROP.

Charles F. Harding, Esq., of Mansfield, Ohio, in a letter bearing date Nov. 29, 1882, says: The estimates on the corn crop of the United States for 1882, made by many parties, including that of the Department of Agriculture, are so very much beneath the actual crop that I ask space in your paper for this communication. I have probably spent more money and time in getting accurate statistics bearing on the wheat, oats and corn crops of 1882, than any single individual in the world, and for this reason the results of my researches, as they apply to corn, will certainly not be without weight and ought to prove of substantial value to your readers. In my estimates I have taken it for granted that the corn average for 1881, reported by the Government, of 64,262,025 acres, is correct, though as is well proven and now universally admitted both acreage and yield was greater than the Government estimate for 1881 (actual yield at least 90,000,000 more than Government estimate of 1,195,000,000.) The average increase of corn acreage for 1882 (Illinois having made a slight decrease) is about 9 per cent., but in order to make my estimates rather below than above the mark, I consider the increased acreage only 5 per cent., making a total corn acreage of 67,474,126 in 1882. I have had five separate reports during the season, made up from responses to inquiries addressed to 15,900 farmers, business men dealing with farmers direct, and bankers. The average of the first four reports gave yield per acre for 1882 of shelled corn of 34 bushels, and the fifth report which was made to me early in November makes exactly the same yield per acre as the average of the four earlier reports, that is 34 bushels of shelled corn per acre, indicating a total yield of 2,294,000,000 of bushels, against the Government estimate made this month of 1,650,000,000. But in order to see what estimate I would reach by taking information, not so ample as mine, because from not nearly so many sources, from an entirely different source. I took the yield per acre in the corn belt as reported for the weeks ending Nov. 11 and Nov. 18, in the leading farm journal of Chicago, and the average was 35.09 bushels of shelled corn per acre. As these come from farmers who, if interested at all, would certainly not be interested in over-estimating the crop, it will be seen that my estimate of 34 bushels or 2,294,000,000 of bushels, is below rather than above actual results. It would be safe to add at least 4 per cent. to the acreage, and 2,400,000,000 is not likely to prove too high for actual results. I know it will be an easy matter for Tom, Dick and Harry to say I am too high, but I hereby offer \$100 to any man who can present to your readers an accurate estimate based upon any thing like the same number of reliable sources of information, which will not place the crop above the estimate I make of 2,293,000,000. It is an easy matter for any man who has spent neither time or money in getting accurate information, to ridicule the estimates of those who have, but my reward will test the sincerity of such talk, and will also show that practically nobody does more than guess at the crop; whereas, I have taken the utmost pains to ascertain in a sensible, business-like way, just what the crop will be. It may be that the following facts will interest your readers: The total average exports of corn, for five years past, at an average price in Chicago of 42½ cents per bushel in gold, have been 87,000,000 bushels of shelled corn per year. This season the corn crop in Europe, taking 100 as an average, is: Russia, 118; Turkey, 117; Italy, 120; Hungary, 120; Roumania, 131. Wheat is selling in Chicago at about 8 cents below the average price for five years, and corn at 25 cents per bushel above the average for the same five years, or proportionately at 33 cents per bushel more than the price of wheat warrants. This on the largest crop by at least 500,000,000 of bushels, and on the smallest foreign demand we ever had, is, to say the least, singular. It may be very unsafe to sell it short, but it looks as if those who want to buy corn for legitimate purposes would be able to get it at Chicago before next May at 33 to 38 cents per bushel. Where

storage is to be obtained for the quantity which will go into Chicago at the average price of other seasons (42½ cents) is a question worth calculating upon by those who are buying it at 55 to 60 cents for winter delivery there. As to the condition of corn, there is some soft corn, owing to frosts, but much less than for the average of three years past, though more bushels than in 1881, which was the best season (fall) for ripening corn we have had for nearly twelve years, and had rains been abundant last year's yield would have been over 2,000,000,000 bushels instead of about 1,300,000,000 bushels, or, as the Government puts it, 1,195,000,000 bushels.

BAD FOR THE GRAIN MIXERS.

"Grain-mixer" has been for several years in many cases only another title for "grain-adulterer." The object of the American grain-mixer is to take inferior grades and by scouring and mixing in a little superior wheat to bring the inferior article of grain up in weight so that it would pass inspection as good No. 2 or No. 3.

During the past month not a little commotion has been created among the grain speculators in Milwaukee and elsewhere, by the refusal of Mr. Peter McGeech, of Milwaukee, one of the heaviest grain operators in modern times, to accept large amounts of wheat which he had contracted to purchase. He justified his course by claiming that "the No. 2 spring wheat he had agreed to take had been vitiated in quality by mixing with it a percentage of carefully cleaned No. 3 and "rejected," so that what was tendered could not fairly grade as No. 2 and really was scarcely marketable."

The matter will probably be adjusted by the Courts.

This "grain-mixing" business has all along been condemned in unmeasured terms by our millers, especially for the reason that the scoured grain mixed with unscoured would have to go through the cleaning machinery in the mill together, the result being, that some grain was scoured too much and some too little.

The business in effect is to pass off an inferior article for a superior one. We hope the Court will make such rulings as will stop this business and allow the miller to receive his grain just as it comes from the hands of the "hard fisted farmer." If the "grain mixer" has any argument to make in his own defense we should be pleased to hear it. Wheat from grain mixing establishments should only be sold by sample.

ITEMS OF INTEREST.

EDWARD ATKINSON makes this striking comparison in the *Atlantic Monthly*: It takes 160,000 men, women and children to make the cotton cloth, the use of which is now enjoyed by the people of the United States, who are the best clothed people in the world. If those who do this work were obliged to use machinery no more effective than the spinning-wheel or hand-loom, it would require 16,000,000 persons continuously employed 10 hours a day to do the necessary work.

SLACKING LIME FOR MORTAR.—The marvelous durability of lime in Italy is attributed by the London *Builder* to the fact that the lime remains in a pit covered with water for two years before it is used, whereas in England and in this country lime is slacked and used the same day. Most building specifications even require newly slaked lime.

The Excelsior Manufacturing Co., St. Louis, are using a new smoke consuming apparatus which is said to answer the purpose admirably. It is the invention of the superintendent and first engineer, and is not patented. The *Age of Steel* thus describes it: A draft of air is admitted through the ash pit and upwards through a hollow bridge wall, and passes through a perforated cast iron top piece. A two-inch gas pipe, running crosswise the boiler, is set in the lining just above the fire door. This pipe has a row of ½ inch holes drilled about an inch apart. These holes are drilled lengthwise the pipe, and the whole line of holes is so set that the draft of air passing from the holes will strike about half way between the grate bars and the top of the bridge wall. On the outside of the side wall is fastened on, to the end of the two-inch gas pipe, a funnel-shaped piece of tin. From the steam drum there extends a half-inch steam pipe, with a stop-valve, to the funnel-shaped piece of tin and into the two inch pipe two or three inches. When the steam is turned on it creates a strong draft of air through the funnel-shaped piece of tin

into the two-inch pipe, from which it passes into the fire bed through the perforated pipe.

TO SAW USERS.—We have just received a second and enlarged edition, with illustrated supplement, of "Grimshaw on Saws." This second and enlarged edition of this standard practical work contains 280 pages and 354 cuts. The supplement (which is also bound separately, and uniform with the first edition for those who already have that) has 120 pages and 120 cuts. The price of the second and enlarged edition is \$4.00; of the supplement, \$2.00. Both volumes are handsomely printed on heavy toned paper, copiously indexed, and strongly bound in cloth, and either will be sent postpaid on receipt of price by E. Claxton & Co., 930 Market Street, Philadelphia. Every saw user should have a copy of this work in his library.

MILL PROPERTY FOR SALE.

Said property is situated in one of the best wheat and corn growing countries, mill and machinery are new. The mill has 2 run of stones, good water power of 18 feet fall and in connection therewith steam power, and a good dwelling house close to the mill. Also a good farm containing 160 acres, all fenced, 60 acres improved with good dwelling house and barn. The property will be sold together or separate to suit buyer. The property is situated in the Town of Washington, Sauk Co., Wis. For terms and particulars apply to John Williams, Logansville, Sauk Co., Wis.

1883.

Harper's Magazine.

ILLUSTRATED.

Harper's Magazine begins its sixty-sixth volume with the December Number. It is not only the most popular illustrated periodical in America and England, but also the largest in its scheme, the most beautiful in its appearance, and the best magazine for the home. A new novel, entitled "For the Major," by CONSTANCE FENIMORE WOOLSON, the author of "Anne," was begun in the November Number. In literary and artistic excellence the Magazine improves with each successive number. Special efforts have been made for the lighter entertainment of its readers through humorous stories, sketches, &c.

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HARPER'S YOUNG PEOPLE.....	1 50
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The volumes of the Magazine begin with the Numbers for June and December of each year. When no time is specified, it will be understood that the subscriber wishes to begin with the current Number.

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1883.

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Harper's Weekly stands at the head of American illustrated weekly journals. By its unpartisan position in politics, its admirable illustrations, its carefully chosen serials, short stories, sketches, and poems, contributed by the foremost artists and authors of the day, it carries instruction and entertainment to thousands of American homes.

It will always be the aim of the publishers to make Harper's Weekly the most popular and attractive family newspaper in the world.

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1883.

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AN ILLUSTRATED WEEKLY—16 PAGES.

SUITED TO BOYS AND GIRLS OF FROM SIX TO SIXTEEN YEARS OF AGE.

Vol. IV. commences November 7, 1882.

The Young People has been from the first successful beyond anticipation.—N. Y. Evening Post.

It has a distinct purpose, to which it steadily adheres—that, namely, of supplanting the vicious papers for the young with a paper more attractive, as well as more wholesome.—Boston Journal.

For neatness, elegance of engraving, and contents generally, it is unsurpassed by any publication of the kind yet brought to our notice.—Pittsburgh Gazette.

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This popular journal is a rare combination of literature, art, and fashion. Its stories, poems and essays are by the best writers of Europe and America; its engravings possess the highest artistic excellence; and in all matters pertaining to fashion it is universally acknowledged to be the leading authority in the land. The new volume will contain many brilliant novelties.

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Address HARPER & BROTHERS, New York.

BOLTING CLOTH!

Don't order your Cloth until you have conferred with us; it will pay you both in point of quality and price. We are prepared with special facilities for this work. Write us before you order. Address,

CASE MFG. CO.,

Office & Factory; Columbus, Ohio
Fifth St., North of Waughten.

GANZ & CO.,

Budapest, Austria-Hungary.

We are the first introducers of the Chilled Iron Rollers for milling purposes, and hold Letters patent for the United States of America. For full particulars address as above.

[Mention this paper when you write to us.]



Jonathan Mills
TRIPLE CENTRIFUGAL REEL
JONATHAN MILLS
PHOENIX REDUCTION MILL

Phoenix Foundry & Machine Works
TERRE HAUTE, INDIANA, U. S. A.
MANUFACTURERS AND MILL BUILDERS.
JONATHAN MILLS, General Manager.

OUR OWN MANUFACTURES.
UNEQUALLED FOR QUALITY, STYLE AND FINISH.
Engines, Shafting, Pulleys, Gearing, Bolting-Chests, Hurst-Frames, and all Flour Mill Iron and Wood Work.

OUR STANDARD MACHINES.
Jonathan Mills Phoenix Rolls. Single or Double, Smooth or Corrugated. Positive hemp rope drive. In every feature an improvement over all competitors. No running together of Rolls. Feed Rolls dispensed with.

Phoenix Reduction Machine. SIX BREAKS in one substantial iron frame. Compact, durable, light-running, with six Centrifugal Reels—one for each break. An aspiration on each reduction. The most complete concentrated mill ever invented. Indispensable for mills having a capacity of from one to ten barrels per hour.

Centrifugal Bolting Reels. Single, Double or Triple. Bristling with Improvements. No Oil ever Required on any of above Machines.

Jonathan Mills Gradual Reduction and Degerminating Machines. Of World-wide Fame.

The Finest Line of Machines in the World.

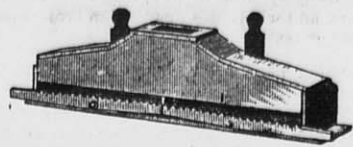
Orders Promptly Filled FOR LION BRAND BOLTING CLOTH, by the Piece, cut or made up to fit any size reel.

We will furnish you anything required at reasonable prices. We keep every kind of Furnishing in stock.

Plans and Programmes Furnished, and complete Mills Built and Started on the Gradual Reduction, Stones or Roller systems or a combination of any.

Write for Information.

The Perfect Feed Box



It insures a perfectly even distribution of the middlings over the entire width of the cloth. Every miller will appreciate this. Fits all purifiers. Address,

CASE MANUFACTURING CO.,

COLUMBUS, OHIO.

W. E. CATLIN & CO., 68 LAKE ST., CHICAGO, ILL. AGENTS.

[Please mention this paper when you write to us.]

Over 1,500 of these Turbines IN USE.



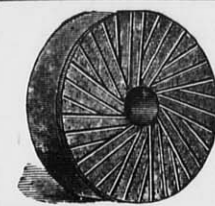
It has tight shutting and easily operated Gate; gives more power for the water used, and will last longer than any other Turbine. Large shop with improved tools for making this wheel and machinery. Illustrated Pamphlet and Catalogue with prices sent free by

BURNHAM BROS.

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[Mention this paper when you write us.]



Mill Furnishing,
Foundrymen & Machinists.
Established 1851.

MILL STONES.

Flouring Mill Contractors.

Send for Pamphlet.

Nordyke & Marmon Co.

Indianapolis, Ind.

[Mention this paper when you write us.]

IMPORTANT NOTICE TO MILLERS.

The RICHMOND MILL WORKS, and RICHMOND MILL FURNISHING WORKS are wholly removed to Indianapolis, Ind., with all the former patterns, tools, and machinery, and those of the firm who formerly built up and established the reputation of this house; therefore to save delay or miscarriage, all letters intended for this concern should be addressed with care to
NORDYKE & MARMON CO.,
INDIANAPOLIS, IND.

An Immense Success—Read it! Read it!

Over one year in operation, giving same satisfaction as when first started.—Fully Guaranteed.—No Filling up of the Cloth.—No experiment any more. Try it and Satisfy Yourself.—It is the only one which gives Satisfaction.—All the Leading Mills are adopting our Machines.—An Important Problem solved at last; taking care of the dust laden air from Middlings Purifiers and other machines, using air to carry off the dust, has been thoroughly met and conquered in the highest degree by the

PRINZ DUST COLLECTOR

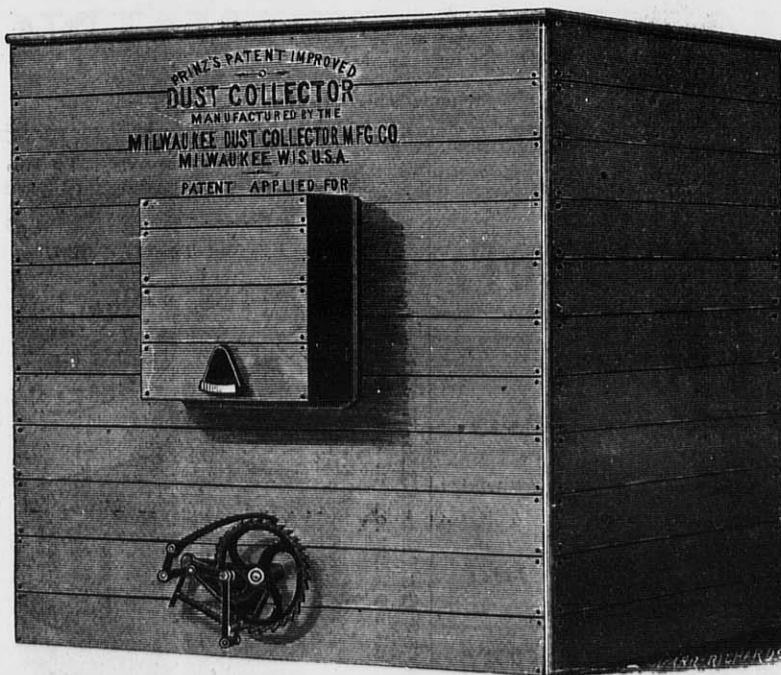
After years of study and experiment success has crowned the labor of F. Prinz. He produced a machine, that will give satisfaction in such a manner that no miller would ask for anything better.

Simplicity is a Leading Feature in this Machine.

No Dead Air Chamber.—The dead air chamber, which has been a source of much trouble in other machines by wearing out and allowing the air to get in, thereby injuring the power of the cleaning mechanism on the cloth, which results in the cloth filling up, is entirely overcome in this machine, as it has NO DEAD AIR CHAMBERS.

Less Power is used with this machine than any other as there is no back pressure on the fan; the motion of the fan has to be reduced whenever this machine is applied.

It does away with the cumbersome dusty, dirty old-fashioned dust room, en-



tirely, and the numerous spouts leading to them, which fill up the Mill, leaving no room to get around.

It Retains the Dust in the Mill, thus allowing no waste of stock by being blown out into the air as is the case with the old-fashioned dust room.

It does away with the liability of dust explosions, as the air coming from the machine is entirely free from dust, which is not the case with the air coming from any other Dust Collector offered to the milling public heretofore.

We the undersigned manufacturers **GUARANTEE ENTIRE SATISFACTION** in the use of this machine.

Our machine *does not infringe on any patent*, which we fully guarantee; on the other hand we caution parties against purchasing infringing machines.

LOW PRICES FOR EXCELLENT MACHINES.

TESTIMONIALS.

MILWAUKEE DUST COLLECTOR MFG. CO.

Gentlemen: We have been using the Prinz Dust Collector for the past year. We consider the machine a great success. It does its work well at all times.

Very truly,

E. T. ARCHIBALD & CO.

Sparta, Mich., Oct. 18, 1882.

Milwaukee Dust Collector Mfg. Co.

Gentlemen:—We have given the Dust Collector received from you a fair trial and are highly pleased with it. We believe it saves us a barrel of Flour a day, (24 hours,) from three run of stones, which will soon pay for it.

Yours respectfully,

SPARTA MILLING CO.

Milwaukee Dust Collector Mfg. Co.

Gentlemen:—Yours of the 6th at hand and noted. We shall want more of your machines as soon as we can get time to put them in, as we regard them a success. In fact they are the best machine of the kind on the market.

Yours,

THORNTON & CHESTER.

St. Louis, Mo., Oct. 11, 1882.

Milwaukee Dust Collector Mfg. Co., Milwaukee, Wis.

Gentlemen:—The "Prinz Dust Catcher" on our No. 2 Smith's Purifier has now been in

steady operation for 30 days and works satisfactorily in every way; the machine has no connection with any room and Dust room; the fan blows direct into the mill without any visible signs of dust; it deposits from 75 to 80 pounds in a barrel in 25 hours, being all the refuse matter from the purifier; another machine has arrived; will attach it to a Garden City Purifier and have it in operation in a few days.

Yours respectfully,

HEZEL MILLING CO.

Spring Valley Ohio, Oct. 12, 1882

Milwaukee Dust Collector Mfg. Co.

Gentlemen:—We have in use one of your Dust Collectors. We are entirely satisfied with its work and would not exchange it for any machine of its class we know of.

Yours respectfully,

BARRETT & SON.

Owensboro, Ky., Sept. 29, 1882.

Milwaukee Dust Collector Mfg. Co.

Gentlemen:—The machine you shipped us some time ago reached us the forepart of this week and was put in successful operation to-day. It starts off all right and we hope will continue to work well.

Your truly,

W. J. & L. LUMPKIN.

Hastings, Minn., Oct. 19, 1882.

Milwaukee Dust Collector Mfg. Co.

Gentlemen:—We have now been running your Dust Collector about 10 days and are well pleased with it. If we had room would put in more.

Yours truly,

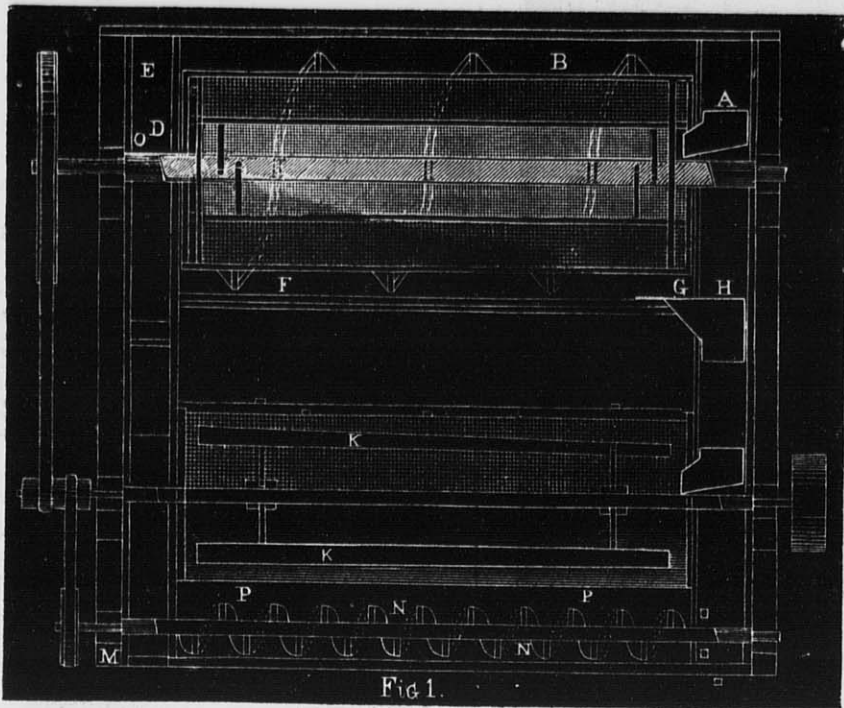
CHAS. ESPENSCHIED.

Milwaukee Dust Collector Mfg. Co.,

Milwaukee, Wis.

[Please mention the United States Miller when you write to us.]

THE CENTRIFUGAL ERA.



The Centrifugal system creates a new epoch in milling machinery, and is rapidly becoming popular and indispensable, gradually supplanting the old system as it goes marching along, and so we take pleasure to introduce the Excelsior

CENTRIFUGAL

Flour Dressing Machine.

(Frank Andree's Patent, Sept. 20th 1882.)

FIRST PREMIUM AND DIPLOMA AT MISSOURI STATE FAIR, ST. LOUIS, OCT. 5, 1882.

Our New Double Reels { One for Scalping Bran. One for Bolting Flour. } Our New Double Iron Conveyors { To Convey and Re-Convey. }

Our Two Bolting Frames { To which the cloth is attached, and by having two sets of frames, of different numbers they can be changed in sixty seconds; a great convenience to millers. }

Our Great Feature { The bottom reel frame is composed of Zinc instead of Cloth, so that the Bolting Cloth, in the two upper frames, escapes actual wear and tear; hence the expense on cloth is merely nominal the year round, which is very agreeable to millers. }

Our Reels excel any other for re-bolting low grades of Flour; handling lumpy and impure material; dusting middlings and bran; flattening germ stuff; finishing tailings and cut-off; bolting chop from any rollers; separating break-flour; redressing and mixing flour, and they are especially valuable in finishing patent flour.

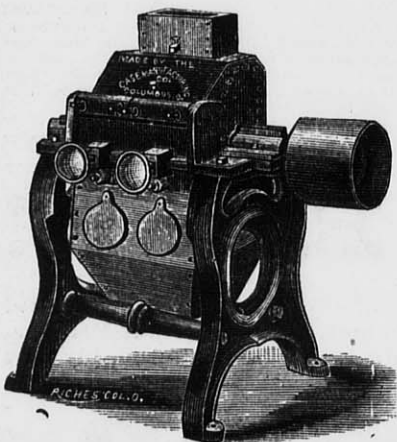
Our Reels have a capacity three times greater than the common cylinder; they take up less space; make a cleaner and whiter flour; leave less waste and are less expensive.

For information and reference apply to

FRANK ANDREE & COMPANY, SOLE MANUFACTURERS, **330 E. DIVISION STREET, Chicago, Ill.**

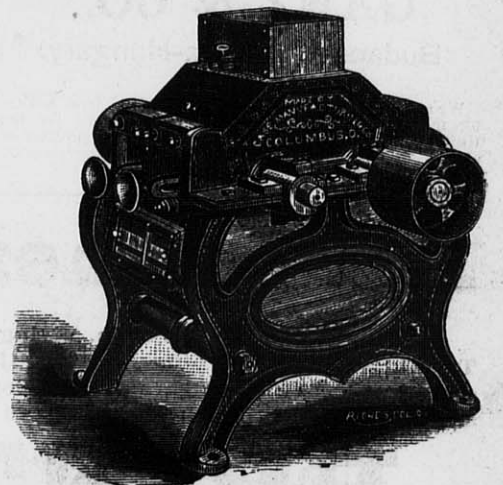
[Mention the United States Miller when you write to us.]

IN THE CASE SYSTEM OF GRADUAL REDUCTION.



Single Break Machine, capacity 5 to 60 bushels per hour.

The first three reductions are made on Break Machines, not Rolls—all intelligent experience proves that Breaks are better than Rolls on the earlier Reductions. In proof that our system is the least complicated, least expensive and most successful we can refer to many Mills all of which are running on our full system in the following states, viz:—New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Dakota, Iowa, Missouri, Kansas, Tennessee, etc., etc. We furnish the complete out-fit of Breaks, Rolls, Purifiers, (we make the unrivalled Case Purifier,) Scalping Reels, etc. Our Chest of Scalping Reels is the neatest and most convenient made. Millers wanting a complete system or a good Roll or Purifier are invited to write us.



Double Break Machine, capacity 120 bushels per hour.

CASE MANUFACTURING CO., OFFICE AND FACTORY, 5th Street, North of Naughten.

COLUMBUS, OHIO.

[Please mention the United States Miller, when you write to us.]

J. H. REDFIELD, Millwright and Mill Furnisher,

Patentee and general Agent for

REDFIELD'S COMBINED ELEVATOR & PURIFIER.

And the Champion Wheat Cleaning Machinery.

Large stock of Du Four's Bolting Cloth on hand, which we sell lower than can be purchased elsewhere. Cloths made up to order and guaranteed to fit, and be of the best material, and made in the most workman-like manner.

Send for catalogue and price list. It will pay you.

J. H. REDFIELD, Salem, Ind.

[Please mention the United States Miller when you write to us.]

JOHN C. HIGGINS, Manufacturer and Dresser of **Mill Picks,** No. 169 W. Kinzie Street, CHICAGO, - ILLINOIS.



Picks will be sent on 30 or 60 days' trial to any responsible miller in the United States or Canada, and if not superior in every respect to any other pick made in this or any other country, there will be no charge, and I will pay all express charges to and from Chicago. All my picks are made of a special steel, which is manufactured expressly for me at Sheffield, England. My customers can thus be assured of a good article, and share with me the profits of direct importation. References furnished from every State and Territory in the United States and Canada. Send for Circular and Price List.

[Mention this paper when you write us.]



HENRY HERZER, Manufacturer and Dresser **—OF—**

MILL PICKS!

NO. 456 ON THE CANAL, MILWAUKEE, WIS.

I have had twenty-two years experience in the manufacture and dressing of Mill Picks, and can and do make as fine Mill Picks as can be made by anybody anywhere. I use only the best imported Steel for the purpose. My work is known by millers throughout the country, and is pronounced to be first class by the very best judges. We have hundreds of the most gratifying testimonials from nearly all the States. We solicit your orders and guarantee satisfaction. Address as above. [Please mention this paper when you write.]

WE HAVE THE BEST GATE IN EXISTENCE and by it the most Direct Efficient Applications of the Water to the Wheel.

ALCOTT'S TURBINE WATER WHEELS
MEDAL & PREMIUM AWARDED TO
Most Perfect Turbine in Use.

ALCOTT'S IMPROVED TURBINE WATER WHEEL.

MANUFACTURED BY T. C. ALCOTT & SON, MOUNT HOLLY, N. J.

MANUFACTURERS OF Circular Saw Mills, Shafting, Pulleys, Hangers & General Mill Machinery, Stating Particulars of Stream, &c. Address: T. C. ALCOTT & SON, Mount Holly, N. J.

[Mention this paper when you write us.]

C. F. MILLER, MANSFIELD, OHIO.

Materials and Plans for Stone or Roller Mills. Roller Mills furnished complete with all necessary appliances, and the most perfect system of bolting for Mills of any desired capacity. Genuine Zurich Silk Bolting Cloths by the piece, or made up with Webbing. Warranted best quality.

[Mention the United States Miller when you write.]

PATENTS

We continue to act as Solicitors for Patents, Caveats, Trade Marks, Copyrights, etc., for the United States, Canada, Cuba, England, France, Germany, etc. We have had thirty-five years' experience. Patents obtained through us are noticed in the SCIENTIFIC AMERICAN. This large and splendid illustrated weekly paper, \$3.20 a year, shows the Progress of Science, very interesting, and has an enormous circulation. Address MUNN & CO., Patent Solicitors, Publishers of SCIENTIFIC AMERICAN, 37 Park Row, New York. Hand book about Patents sent free.

Northwestern Mill Bucket Manufactory

810, 812, and 814 FLORIDA STREET.



Is furnishing Mills and Elevators in all parts of the country with their superior BUCKETS. They are UNEQUALLED for their SHAPE, STRENGTH and CHEAPNESS. Leather, Rubber, Canvas Belting and Bolts at lowest market rates. We have no traveling agents. Sample Buckets sent on application. Large orders will receive liberal discounts. Send for sample order. Address all inquiries and orders to L. J. MUELLER, 197 Reed St., Milwaukee, Wis. [Mention this paper when you write us.]

Milling Made Profitable.

We build mills on any system known. We guarantee a saving of 25 per cent. on the cost of construction and room occupied by

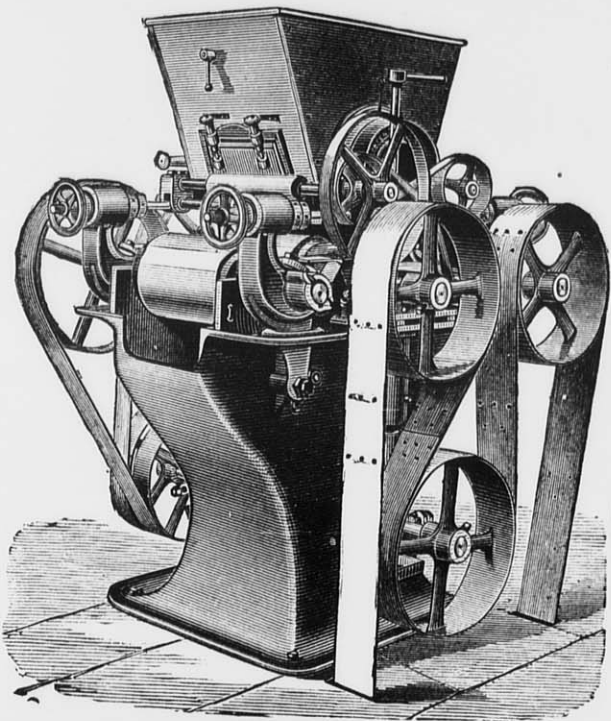
BOLTING CHESTS.

We handle 45 bushels per hour on one reel successfully. C. B. SLATER & CO., Blanchester, Ohio.

EDW. P. ALLIS & CO.

MILWAUKEE WISCONSIN.

MILL BUILDERS AND FURNISHERS,



AND SOLE MANUFACTURERS OF

GRAY'S PATENT NOISELESS

ROLLER MILLS

CORRUGATED AND SMOOTH CHILLED IRON ROLLS,

WEGMANN'S PATENT PORCELAIN ROLLER.

We shall be Pleased to hear from Millers contemplating an improvement in their Mills, or Building new ones, and can furnish Estimates and Plans of our system of GRADUAL REDUCTION ROLLER MILLING. We have built and Changed over hundreds of Mills, in all parts of the Country, and using all classes of wheat, BOTH HARD AND SOFT, and can furnish references on application. The Largest and Best Mills of this Country are using our System and Roller Machines. Messrs. C. A. Pillsbury & Co., of Minneapolis, have over 400 PAIRS OF OUR ROLLS AND HAVE RECENTLY PLACED AN ORDER WITH US FOR ABOUT ONE HUNDRED AND TWENTY MORE. We have had a longer and larger experience in Roller Mill Building than any other manufacturers of this country. There is no EXPERIMENT ABOUT OUR SYSTEM and Rolls, so expensive to millers, and when the mills that we build or change over are ready to start, THEY DO SO AND WITH PERFECT SUCCESS, and there is no further changing, additions, stopping or expense. We manufactured and sold during the year 1881 over TWO THOUSAND FIVE HUNDRED pairs of rolls.

We can send competent men to consult with any millers who contemplate an improvement, and whom they can depend upon as being RELIABLE AND THOROUGHLY COMPETENT to advise them as to the number and kind of machines required, best method of placing them and the change required, if any, in the bolting and purifying system. WE DO NOT URGE A GENERAL CLEANING OUT OF ALL OLD MACHINERY unless we clearly see such would be the ONLY COURSE TO PURSUE to make a SATISFACTORY AND RELIABLE MILL. In nearly all instances we can use all the Old Machinery, leaving it in its original position, or with as slight a change as possible. We aim to make the Improvement so that it will be a Profitable one to the Miller, and at the least expense possible.

Our System is THOROUGH and RELIABLE, and our Roller Machine Perfected by Long Experience, and the Miller takes no chances in using them, as HE DOES with the New Fangled Notions of Drive and Adjustment on many other machines now TRYING TO FOLLOW OUR IMPROVEMENTS and still avoid our Patents, in BOTH of which THEY FAIL. We were the first to advocate the Entire Belt Drive, and were opposed by every other maker, who claimed it was not positive, etc., etc., and now that our Belt Drive is an ACKNOWLEDGED SUCCESS, and will SUPERSEDE EVERY OTHER STYLE, these advocates of Gear Drive have suddenly learned that Belts are the Thing. The same may be said of our Spreading Device, Feed Gates, and Adjustable Swing Boxes. Other Makers are now copying these. ALL these Features, including BELT DRIVE with ADJUSTABLE COUNTERSHAFT and TIGHTENER, the SPREADING DEVICE, FEED GATES, Adjustable Swing Boxes and Leveling Devices, Self-Oiling Boxes, etc., are secured to us by several Strong Patents, and we CAUTION MILLERS in regard to these Infringements of Our Patents and Rights, for we shall look to THEM for Redress. The matter is in the hands of our Attorneys, who will soon take VIGOROUS ACTION against the Makers and USERS OF MACHINES infringing Our Patents.

Several machines are already on the market which Broadly Infringe, and we are informed that other makers are now changing their Old Style Machines, and adopting in a large measure Our Improvements. BEWARE OF THEM.

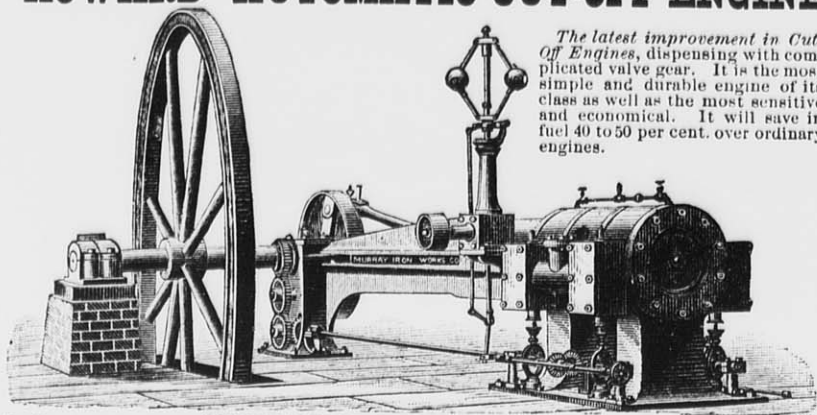
Send for New Illustrated Catalogue, Giving full Information, to

EDW. P. ALLIS & CO.,

MILWAUKEE, WIS.

Branch Office 318 Pine Street, Benson Block, SAN FRANCISCO, CAL.

J. R. CROSS, Manager.

"HOWARD" AUTOMATIC CUT-OFF ENGINE.

The latest improvement in Cut-Off Engines, dispensing with complicated valve gear. It is the most simple and durable engine of its class as well as the most sensitive and economical. It will save in fuel 40 to 50 per cent. over ordinary engines.

Built only by the **MURRAY IRON WORKS CO., BURLINGTON, IOWA.**

BUILDERS OF ALL KINDS OF ENGINES AND MACHINERY.

Mention this Paper when you write to us.

CHOICE BEVELLED EDGE

FLOUR BRANDS

For two dollars and upwards. Also RUBBER STAMPS, BURNING BRANDS, SEALS, STEEL NAME STAMPS, LETTERS AND FIGURES, Etc. Orders promptly attended to.
CHAS. H. CLARKE,
Box 114 82 Wisconsin St., Milwaukee.

FEED MILLS FOR SALE 2-30 inch and 1-24 inch, Allis & Co.'s Iron Frame under Runner Feed Mills for sale. Used but a few months.

Address, **H. P. YALE & CO.,**
Machinery Dealers. Milwaukee, Wis.

TO WHOM IT MAY CONCERN.

Notice is hereby given, that all differences existing between **Mr. A. MECHWART**, Director of Ganz's Establishment, owner of the patents on Corrugated (hard-cast) Rollers, dated March 9th, 1876, No. 5527, and the undersigned have been amicably settled; that we concede his patent to be fully in force and that we will, during the continuance of this patent, waive the right of sale of said Corrugated Rollers throughout Austria-Hungary.

VIENNA, September 20, 1882.

G. Daverio.
A. Niessner & Co.

Referring to the above we wish to announce that all legal proceedings against Messrs. A. NIESSNER & CO., and Mr. G. DAVERIO, have been suspended.

BUDA-PEST, September 22, 1882.

GANZ & CO.,

Iron Founders and Machinery Mfg. Co.

[Mention the United States Miller when you write to us.]

COCKLE SEPARATOR MANUFACTURING COMPANY, MILWAUKEE.

GENERAL MILL FURNISHERS

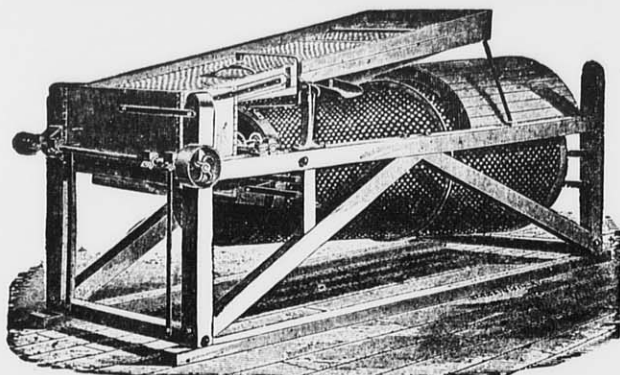
AND MANUFACTURERS OF

IMPROVED COCKLE SEPARATORS

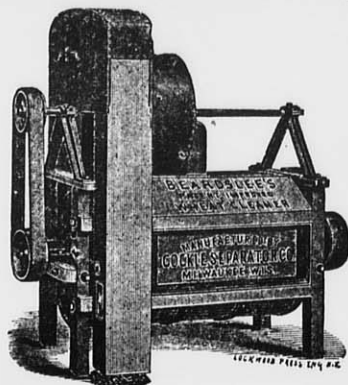
(Kurth's Patent,) Also built in combination with

Richardson's Dustless Wheat Separators!

Also Sole Manufacturer of **BEARDSLEE'S PAT. GRAIN CLEANER.**



PLAIN COCKLE MACHINE.



BEARDSLEE'S WHEAT CLEANER

Perforated Zinc at Bottom Figures.

WE GUARANTEE GREAT CAPACITY combined with GOOD QUALITY OF WORK. Any common Sieve will separate the cockle from wheat, but to separate it **WITHOUT WASTE** is the **GREATEST FEATURE** of our Machine. A **WASTEFUL** machine is a **DAILY LOSS OF MONEY** in a mill. There is **NO MACHINE IN THE MARKET** which can stand comparison with ours.

Carbondale, Ill., Dec. 2, 1881.

Cockle Separator Mfg. Co., Milwaukee.

Gentlemen:—Replying to your late favor, would say that we can cheerfully recommend your Cockle Separator as doing all that you claim for it. We have tested ours thoroughly by this time and know whereof we speak. We would not think of doing without it, having tried it once, and can conscientiously vouch for its good work.

Yours respectfully,

BROWN & WINFREY.

Perrysville, Ind., Nov. 24, 1881.

Cockle Separator Mfg. Co., Milwaukee.

Sirs:—The combined machine I bought of you has been running about three weeks. It certainly does all you claim for it, and is the most perfect Separator that I have any knowledge of.

Yours respectfully,

B. O. CARPENTER.

Hixton, Jackson Co., Wis., Dec. 30, '81

Cockle Separator Mfg. Co., Milwaukee.

Gents:—In answer to your inquiry of the 28th inst., I would say that the combined machine I bought of you last summer, works to my entire satisfaction.

Respectfully yours,

W. T. PRICE,

per **D. G. THOMAS.**

P. S.—I have been milling now for twenty-seven years, but never have I seen anything that will equal yours in cleaning wheat.

As an Oat Separator it is No. 1, and for Cockle it cannot be beat. I can take screenings and separate the cockle from it without wasting any of the small wheat. In my opinion every mill in the United States ought to have one, and if I were to build a mill I would have no other. I remain

Yours, etc.

D. G. THOMAS.

Minneapolis, Minn. Aug. 22, 1881.

Cockle Separator Mfg. Co.:

We have been using two of Beardslee's wheat cleaners, a scourer and finisher, for nearly two years, and are passing one hundred and fifty bushels per hour through them, one third more than rated capacity, and are not using any other cleaners, and consider our wheat as well cleaned as any in Minneapolis.

Yours truly,

CAHILL, FLETCHER & CO.

La Crosse, Wis., July 30, 1881.

Cockle Separator Mfg. Co., Milwaukee.

Gentlemen:—The Beardslee Grain Cleaner sent me about the middle of June has been in operation since that

time with very satisfactory results. We cannot see that it breaks the wheat or requires an unusual amount of power to run it.

Yours truly,

WILLIAM LISTMAN.

Milwaukee, Wis., Aug. 23, 1881.

Cockle Separator Mfg. Co.

Gentlemen:—The Beardslee's Grain Cleaners which we have purchased from you for our New Era and Milwaukee Mills give us the best of satisfaction. Experienced millers having seen the work done by the machine agree with us, that it cannot be beat. You are at liberty to use our names as a reference, and to any party calling on us we will be pleased to show the machine in operation.

Yours truly,

NEW ERA MILLING CO.

Pott's Patent Automatic Feeder!

The best device for regulating the FEED ON ROLLER MILLS, PURIFIERS, and other machines requiring a regular feed, spread out the full width. Very cheap and simple. Sent on trial upon application. Write for circulars with illustrations. Perforated Zinc of all sizes at low rates. Send for Illustrated Catalogue.

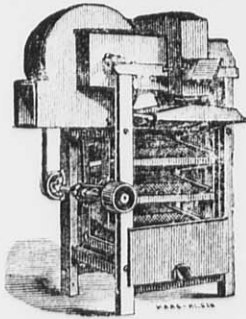
HOWES, BABCOCK & EWELL,

Established 1856.

Silver Creek, Chautauqua County, New York, U. S. A.

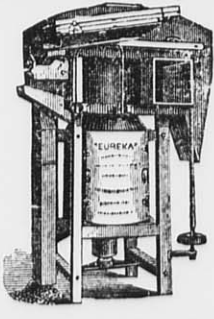
Established 1856.

MANUFACTURERS OF THE WORLD-RENOWNED EUREKA GRAIN CLEANING MACHINERY AND SPECIALTIES HEREWITH ILLUSTRATED



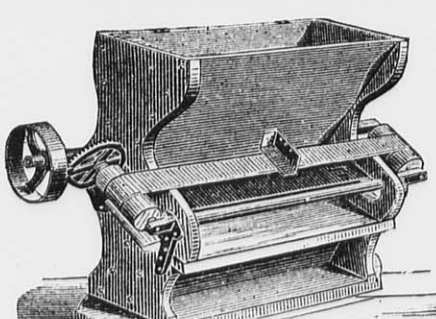
The Eureka Separator

occupies but little space, does its work in an effectual manner. Is also built for use in Elevators and Warehouses, with a capacity of from 100 to 1,000 bushels per hour.



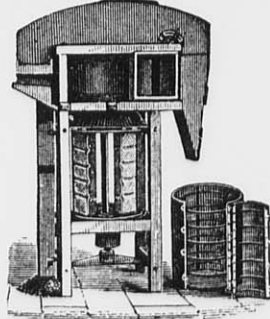
The Eureka Smut and Separating Machine.

A combined Smut and Separating Machine, having thorough ventilation. Over 14,000 of these Machines are now in use.



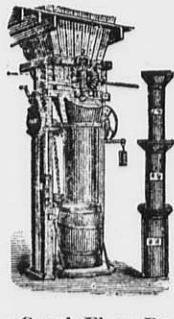
Eureka Magnetic Automatic Separator.

Removes all metallic particles from a flowing stream of grain, requiring no attention from the miller. 5 sizes.



Eureka Brush Finishing Machine

Recognized as the leading one of this class of machines. Universally recommended for finishing the process of cleaning.



Silver Creek Flour Packer.

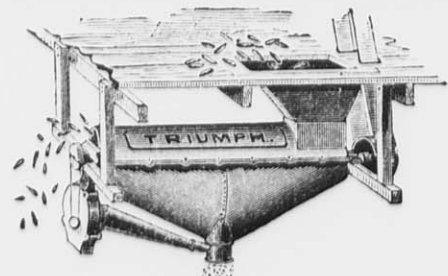
Will pack whole and half barrels, and half, quarter, eighth and sixteenth barrel sacks. Provided with labor-saving patent creveling steel coil spring regulating the packing to perfection.

GENUINE DUFOR AND ANCHOR BRAND BOLTING CLOTHS.

Office and Warehouse in England, 16 MARK LANE, LONDON, E. C.

FULL STOCK ALWAYS ON HAND, MADE UP BY THE AID OF OUR OWN PATENTED ATTACHMENTS, IN A SUPERIOR MANNER.

Gen. Agency for Australian Colonies & New Zealand, **THOS. TYSON, MELBOURNE, VICTORIA.**

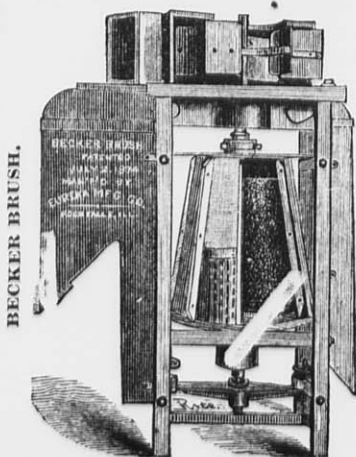
TRIUMPH POWER CORN SHELTER.

Shells and Cleans 2,000 Bushels Ears per Day. The Cheapest, Best, and most Simple Power Corn Shelter in use. Send for Circular and Price List.

Manufacturers of Steam Engines, Mill Builders and Mill Furnishers.

THE PAIGE MFG. CO., Painesville, Ohio.

Mention this paper when you write us.



BECKER BRUSH.

EUREKA MANUFACTURING CO.,

Manufacturers and Sole Proprietors of the

BECKER BRUSH,

Galt's Combined Smut and Brush Machine.

The Only Practical Cone-Shaped Machines in the Market, and for that Reason the Best.

ADJUSTABLE WHILE IN MOTION.

Nearly 1,000 of these Machines in Use.

In the United States and foreign countries, and so far as we know all that use them are pleased. Millers, millwrights, and milling experts claim the Cone Shape Solid Cylinder Brush is the true principle to properly clean grain. All machines sent on trial, the users to be the judges of the work. For price and terms apply to

EUREKA MAN'G CO., ROCK FALLS, ILL., U. S. A.

[Mention this paper when you write.]

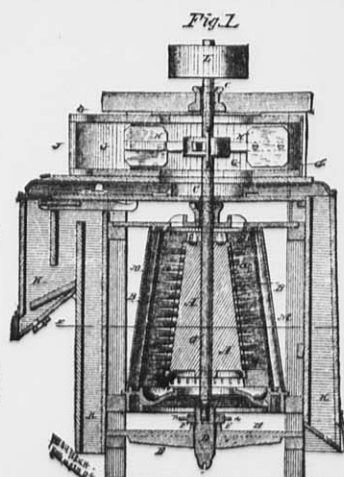


Fig. L